SAVE OUR SOUND
alliance to protect nantucket sound

July 16, 2010

VIA FEDEX

Mr. Brendan McCahill
Environmental Engineer
U.S. Environmental Protection Agency – New England
5 Post Office Square
Suite 100, Attn: OEP-5-2
Boston, MA 02109-3912

Re: Cape Wind Project Outer Continental Shelf Air Permit Review

Dear Mr. Cahill:

The Alliance to Protect Nantucket Sound (APNS) hereby set forth their comments on the proposed Federal Outer Continental Shelf (OCS) Air Permit Approval (APA) for the proposed Cape Wind Project. We thank Region 1 of the Environmental Protection Agency (EPA) for your diligence with regard to the entire scope of the Cape Wind Project review, and the agency's extensive and thorough comments to and involvement with both the U.S. Army Corps of Engineers (Army Corps) and Minerals Management Service (MMS). Throughout the nearly ten-year process, your office has been a consistent voice of reason, and champion of a proper regulatory process and adherence to the requirements of statutes designed to balance interests and protect our natural resources. Now that EPA has its own decision to make on the project, we are confident that you will continue to demonstrate that same commitment to the OCS APA process. We are concerned, however, by several factors in the current OCS APA proposed permit. The purpose of these comments is to identify current deficiencies in the proposal and suggest appropriate ways of complying with existing statutory and regulatory duties.

Background

On December 17, 2008, Cape Wind Associates (CWA) submitted an OCS air permit application to EPA New England. The application is intended to cover emissions from the diesel compression ignition engine construction equipment to be used during the construction and operation of the Cape Wind project. The engines emit criteria pollutants including nitrogen oxides (NO_X), carbon monoxide (CO), particulate matter (PM), sulfur dioxide (SO_2), and volatile organic compounds (VOC). In the application, CWA provided the following information to support its statement that it will meet all air permit requirements codified in section 328(a) of the Clean Air Act (CAA) and 40 C.F.R. Part 55 and all other applicable federal requirements. According to the application, CWA will:

4 Barnstable Road, Hyannis, Massachusetts 02601
▫ 508-775-9767 ▫ Fax: 508-775-9725

1. Apply Lowest Achievable Emission Rate (LAER) for NO_X emissions during the Cape Wind project construction phase (Phase 1);

2. Obtain NO_X emission reductions to offset the Phase 1 NO_X emissions;

3. Apply Best Available Control Technology (BACT) for all emissions during Phase 1 and the Cape Wind project operational phase (Phase 2);

4. Perform an air quality analysis to ensure that the emission increase from the project would not cause or contribute to a violation of any applicable National Ambient Air Quality Standards (NAAQS), which are maximum concentration "ceilings" measured in terms of total concentration of a pollutant in the atmosphere; and

5. Comply with all other state and federal regulations.

Under section 328(a) of the CAA, EPA must establish air pollution requirements for OCS sources located within 25 miles of States' seaward boundaries. These requirements and their implementing regulations at 40 C.F.R. Part 55 apply the same pollution control requirements to an OCS source that would apply to that source if it were located in the corresponding onshore area (COA), typically the onshore attainment or nonattainment area closest to the source.

On June 10, 2010, EPA issued a notice proposing to issue an OCS APA to CWA for the project's construction and operation periods (Phases 1 and 2). EPA is proposing that CWA control air emissions using the following emission control technologies and operations:

1. The use of newer low-NO_X engines installed with diesel oxidation catalysts that reduce NO_X, PM, CO, and VOC emissions; and

2. The use of ultra-low sulfur diesel (ULSD) for all construction equipment that reduces SO_2 and PM emissions.

EPA's proposal requires CWA to offset its Phase 1 NO_X emissions by purchasing 285 tons of NO_X emission reduction credits through the Massachusetts offsets trading bank. In an attempt to avoid permit revisions while allowing for necessary repair activities, EPA has proposed that CWA limit Phase 2 emissions to 49 tons per year or less.

CWA's own air quality analysis indicates that the proposed project's impacts will be below all applicable NAAQS.

Without EPA's approval of the OCS APA, the Cape Wind project cannot proceed. While MMS has issued a Record of Decision (ROD) to offer a lease to CWA for the proposed project, CWA may not proceed without obtaining other necessary federal and state permits, including the OCS APA from EPA. For the reasons discussed below, EPA must review the project again using appropriate and correct standards and completing additional public review.

Clean Air Act Issues

In general, we believe EPA has appropriately identified the non-propulsion engines on the construction vessels as the primary source of emissions and that, by virtue of section 328 of the CAA, these sources are subject to the LAER requirement and the requirement to offset criteria pollutant emissions.

That said, we see important deficiencies in the EPA analysis that prevented the proposed permit from meeting the statutory requirements of the CAA, and therefore prevent EPA from approving the permit in its current state. We discuss these deficiencies in turn below.

First, EPA admits that CWA must show it will meet all NAAQS (as required by the Massachusetts rules), while claiming that CWA will not cause an exceedance of any NAAQS. *See, Attachment I to the Fact Sheet*, email from B. Hennesey to I. McDonnell, *Modeling for Cape Wind's Local Impacts Relative to the National Ambient Air Quality Standards* (June 3, 2010).

However, EPA has not modeled CWA's compliance with the new NAAQS for NO_X issued in February 2010. 75 Fed. Reg. 6,474 (Feb. 9, 2010). As you know, EPA has issued specific guidance that a new NAAQS applies to permitting decisions from its effective date forward. While the EPA guidance applies specifically to federal Prevention of Significant Deterioration permitting decisions, its reasoning applies equally to permitting decisions required by State Implementation Plans such as that in force in Massachusetts.

As EPA knows, the failure to analyze whether CWA construction activities will result in exceedances of the new NO_X NAAQS is not academic. As recently as June 29 of this year, the EPA issued a 29 page guidance document discussing reports from stakeholders "indicating that some sources – both existing and proposed – are modeling potential violations of the 1-hour NO_2 standard." *See, Guidance Concerning the Implementation of the 1-hour NO_2 NAAQS for the Prevention of Significant Deterioration Program, to Regional Administrators from S. Page, Director, Office of Air Quality Planning and Standards* (June 29, 2010). EPA is required to determine whether such programs exist in the case of the Cape Wind permit, and may not proceed to issue a permit without undertaking such an analysis.

This month, EPA also issued a new short term NAAQS for sulfur oxides. EPA has likewise provided no analysis of whether the Cape Wind project will result in exceedances of the new SO_X standard. Given that the modeling analysis referred to by EPA shows that the emissions from construction will be at least 87 percent of the previous SO_X NAAQS, and that it can be expected to be more difficult to demonstrate attainment of the short term SO_X NAAQS, it is important that EPA undertake and provide an analysis of the short term SO_X concentrations associated with the proposed construction program. Once again, without such a demonstration the agency cannot proceed to issue the requested air permit.

In addition, the emissions analysis does not capture other impacts of the project. For example, the Federal Aviation Administration has proposed to restrict the airspace for the 25

square miles surrounding the proposed project. Planes will be required to circumnavigate the area, increasing emissions. Likewise, vessels traveling in the area will be required to alter and lengthen their courses in order to avoid the project, further increasing emission levels.

We would also like to use this opportunity to highlight three additional and related issues with the proposed project and EPA's federal permitting authority: inadequate analysis of project alternatives, failure to properly consult on issues of historic and cultural preservation, and failure to consult on impacts to threatened and endangered species.

Analysis of Project Alternatives.

Additionally, EPA has an obligation to conduct an independent analysis of project alternatives. EPA has consistently expressed concern over MMS's flawed analysis of alternatives under the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 *et seq.* Ironically, EPA has now taken the position that no analysis of alternatives needs to be performed under the agency's CAA authority for purposes of the OCS APA.

Under NEPA, agencies must consider a reasonable range of alternatives, including a no-action alternative, before taking any action, such as issuing a permit, that may significantly impact the quality of the human environment. The Council on Environmental Quality's (CEQ) regulations implementing NEPA at 40 C.F.R. § 1502.14 explain that a reasonable range of alternatives should be presented and compared in an Environmental Impact Statement (EIS) to allow for a "clear basis for choice among options by the decision maker and the public." CEQ guidance elaborates on this section, stating that "Section 1502.14 requires the [EIS] to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant." *Forty Most Frequently Asked Questions Concerning CEQ's National Environmental Policy Act Regulations,* 46 Fed. Reg. 18,026, #2a(A) (March 23, 1981).

In EPA's April 5, 2002, comments on the Army Corps' Notice of Scoping, the agency recommended broadening the purpose and need statement to allow for the proper inclusion and analysis of more alternatives, and criticized the information used to evaluate the alternatives included, stating "[a]t this point, the economics of the project are poorly understood and a greater level of information will be necessary to evaluate the proposed alternative as well as other alternatives that could achieve the project purpose." *Exhibit 1.* In April 2008, EPA commented that the MMS DEIS "did not provide enough information to fully characterize baseline environmental conditions and environmental impacts of the proposed project, and did not adequately consider alternatives to avoid or minimize impacts." *Exhibit 2. For additional discussion of MMS's failure to adequately consider and analyze alternatives to the proposed project, see comments submitted by APNS, Exhibits 3 - 5.* Neither CWA nor either of the project's lead agencies provided the requested information. Nor did MMS provide any additional analysis of alternatives.

APNS recognizes that under the Energy Supply and Environmental Coordination Act of 1974, 15 U.S.C. § 793(c)(1), CAA decisions are not considered "major federal actions" and are thus exempt from the NEPA requirement that an environmental impact statement be prepared for the proposed permit. However, nothing in that Act exempts EPA from its duty to conduct an alternatives analysis, which is a duty flowing from the CAA itself.. Under NEPA at section 4332(E), federal agencies must "study, develop, and describe appropriate alternatives to recommend courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." This requirement for the analysis of alternatives exists wholly independent of the duty contained in section 4332(C) to prepare an EIS for "major federal actions significantly affecting the quality of the human environment." This independent statutory requirement applies to all agencies, including EPA, and nothing in section 793(c)(1) exempts the agency from its separate duty to evaluate alternatives. While, typically, the requirement imposed by section 4332(E) to analyze alternatives is satisfied through the preparation of an Environmental Assessment or EIS, here, given the exemption from the preparation of an EIS required by section 4332(C), EPA must prepare an independent alternatives analysis to support its permitting decision in order to meet the requirements of section 4332(E).

Section 173(a)(5) of the CAA underlines the existence of such a duty. It provides that in deciding whether to issue a nonattainment new source review permit – a requirement that is incorporated into the OCS APA at issue here – EPA must find that an analysis of alternative sites, sizes, production processes and environmental control techniques for such proposed source demonstrates that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification. Clearly, this language is similar to NEPA, and in fact it is stronger than the language in NEPA because it requires substantive balancing and not just a discussion of the issues. APNS is aware of precedent to the effect that EPA can rely on NEPA statements from other agencies to satisfy this requirement. But clearly that reliance cannot extend to an analysis that EPA itself has found inadequate on numerous occasions.

Also, given EPA's prior comments on the adequacy of the alternatives analysis in the existing EIS prepared by MMS, it is clear that EPA cannot satisfy the requirements of section 4332(E) by simply adopting the alternatives analysis contained in that EIS. EPA should obtain the additional information needed to fully characterize the baseline environmental conditions and conduct its own independent analysis of a range of alternatives, rather than accept and rely on MMS's flawed findings.

Additionally, since the MMS ROD was issued on April 28, 2010, CWA has made significant changes to the proposed project that EPA must consider. According to recent testimony before the Massachusetts Department of Public Utilities by the Director of Wholesale Market Relations for the Energy Portfolio Management organization at National Grid (the utility with which CWA has entered into an MOU), CWA does not intend to implement a single-phase buildout project as described in the EIS and ROD. Instead, the developer intends to undertake a phased development in Nantucket Sound that is vastly more complex and segmented than even the phased alternative considered, and rejected as being too environmentally harmful, in the EIS.

4 Barnstable Road, Hyannis, Massachusetts 02601
508-775-9767 Fax: 508-775-9725

Such an approach would deviate substantially from the proposed project as approved by MMS and from CWA's own representations to the federal government and the public. It would be remarkable if this did not result in an increase in the already substantial level of construction emissions. APNS has requested, on this basis, that the April 28 ROD be withdrawn, that the application be returned to CWA for revision to reflect the current proposal, and that should CWA intend to proceed with a phased approach, it submit a new application in accordance with 30 C.F.R. Part 285. *See Exhibit* 6.

EPA has an independent duty to consult under section 106 of the National Historic Preservation Act

EPA may not rely on the Department of the Interior for compliance with section 106 of the National Historic Preservation Act, 16 U.S.C. § 470f, and its implementing regulations, 36 C.F.R. Part 800. To date, EPA has inappropriately sought to adopt MMS's consultations to satisfy its own section 106 compliance obligations.

On December1, 2009, four months before MMS terminated section 106 review for the Cape Wind Project, EPA sought to designate MMS as the lead federal agency for compliance with section 106 in a letter to MMS. *Exhibit* 7. In that letter, EPA asked MMS to acknowledge and accept EPA's designation by signing the space provided at the end of the letter.

In its response to EPA in a letter dated December 15, 2009, *Exhibit 8*, MMS thanked EPA for its "letter dated December 1, 2009 requesting that the [EPA] be granted consulting party status in the [NHPA] process for the proposed Cape Wind Energy Project." Effective as of the date of the letter, MMS granted to EPA consulting party status under the authority provided to MMS in 36 C.F.R. § 800.3(f)(3). MMS invited "EPA to participate in any future Section 106 consultation meetings," which means that MMS acknowledged that EPA had its own section 106 responsibilities. But MMS never acknowledged or accepted EPA's attempted designation of MMS as the lead federal agency for section 106 of the Cape Wind project under the provisions of 36 C.F.R. § 800.2(a)(2). Therefore, by a belated and ineffective attempted designation, EPA may not rely on MMS's compliance with the requirements of section 106 to discharge its own responsibilities under that statute. Having failed in that designation, under the ACHP's rules, EPA, like other federal agencies that failed to designate a lead federal agency for the Cape Wind project, "remains individually responsible for their compliance with [the section 106 rules]." *Id.*

Therefore, EPA must independently consult with the Massachusetts State Historic Preservation Officer (SHPO) as well as with the Wampanoag Tribes. To our knowledge, EPA has not initiated the required consultation with the SHPO and Tribes under section 106. It also has the independent responsibility to respond to the recommendations of the Advisory Council on Historic Preservation (ACHP), which strongly recommended to MMS that, based on unavoidable and substantial adverse effects to Tribal and cultural resources, the Cape Wind application should be denied or the project relocated to a less damaging alternative site. MMS unfortunately did not follow the ACHP's recommendations, but EPA has its own obligation to consider and respond to the ACHP's comments.

It appears from recent correspondence between EPA and MMS that EPA has attempted to comply with section 800.2(a)(2). In its air permit documentation, EPA states that MMS was the lead agency for section 106 consultation and that EPA's obligations under section 106 were satisfied by MMS. On December 15, 2009, MMS sent a letter to EPA Region 1, *Exhibit 8*, in which it informed EPA that "it is the lead agency reviewing the Cape Wind project under Section 106 of the [NHPA]. To the extent that activities regulated by EPA as part of this project need to be addressed under section 106, EPA has attempted to rely on MMS's compliance with that law. *See Fact Sheet – Outer Continental Shelf Air Permit Approval: Cape Wind Energy Project*, at page 52. There is nothing in the record, however, to indicate that EPA complied with its duties as a consulting party during any part of the section 106 process.

By its own admission, EPA was not included as a consulting party until mid-December 2009 – eight years after the project review first began, three months before section 106 consultation was terminated, and only four months before a final decision was published. During that entire period, according to the fact sheet, EPA was passively involved, rather than truly working in cooperation with MMS to ensure that the proper process and consideration were being given to the section 106 consultation. Again, EPA has an independent responsibility to fulfill the consultation requirement set forth in section 106 of the NHPA and its implementing regulations. EPA must fulfill this requirement and, in doing so, should give proper consideration and deference to the ACHP's recommendation that the proposed project not be allowed to proceed.

Section 106 of the NHPA prohibits federal agencies from approving any federal "undertaking," including the issuance of any license, permit, or approval, without first considering the effects of the action on historic properties or cultural artifacts that are eligible for inclusion or are listed in the National Register of Historic Places (National Register). 16 U.S.C. §§ 470f, 470w(7). The goal of section 106 is to "identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects" in consultation with the SHPO, Native American tribes, and other parties with a demonstrated interest in the undertaking. 36 C.F.R. §§ 800.1(a), 800.2(a)(4). Federal agencies must also "seek and consider the views of the public" during the section 106 process and develop a plan for public involvement. *Id.* §§ 800.2(d), 800.3(e).

Under the rules promulgated by the ACHP that implement section 106, an agency must, prior to approving an undertaking: (1) identify the area of potential effects; (2) gather information from existing records, consulting parties, Indian tribes, and others likely to have relevant knowledge or concerns, and review existing information on historic properties within the undertaking's area of potential effects (including information on possible historic properties not yet identified); (3) make a reasonable and good faith effort to take the steps necessary to identify historic properties within the area of potential effects; (4) evaluate the undertaking's potential effects on historic properties; and (5) develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects. *Id.* §§ 800.3-800.7. Unless an agency terminates section 106 consultation and asks the ACHP to comment, an agency must document the measures developed and agreed-to for resolving an undertaking's adverse effects in either a Memorandum of Agreement or Programmatic Agreement. *Id.* §§ 800.6(c),

4 Barnstable Road, Hyannis, Massachusetts 02601
▫ 508-775-9767 ▫ Fax: 508-775-9725

800.14(b). Alternatively, an agency may resolve adverse effects through an EIS and ROD appropriately coordinated and conditioned in accordance with the ACHP's rules and with prior notification to the SHPO and ACHP. *Id.* § 800.8(c), (c)(4).

NHPA review was first initiated during the Army Corps's review of the proposed project. While the Corps failed to comply with the NHPA through its failure to assess the visual effects on numerous properties, it nonetheless concluded that the proposed project would adversely affect 16 properties, including two National Historic Landmark properties. Following the passage of the Energy Policy Act of 2005, and as part of the 2008 DEIS, MMS undertook its own section 106 review.

After the January 2009 publication of the FEIS, the ACHP conducted a review of the proposed project. On April 22, 2010, the ACHP submitted its formal comments to Secretary of the Interior Salazar. The ACHP recommended that the Secretary not approve the proposed project, concluding that the proposed project will adversely affect 34 historic properties, including 16 historic districts and 12 individually significant historic properties on Cape Cod, Martha's Vineyard, and Nantucket Island, and six properties of religious and cultural significance to tribes, including Nantucket Sound itself. The ACHP also determined that alternatives were available that would not have adverse impacts on historic properties. On March 1, 2010, Secretary Salazar, on behalf of MMS, terminated section 106 consultation with ACHP, and requested that ACHP submit comments.

On April 28, 2010, concurrent with signing and releasing the Record of Decision, Secretary Salazar sent a letter taking the unusual step of rejecting the ACHP's comments in their entirety. MMS's revised Environmental Assessment/Finding of No New Significant Impact, posted on its website the same day, purported to address this issue, but did not adequately address the ACHP's findings and recommendations.

On June 25, 2010, numerous parties, including APNS, filed a lawsuit in federal district court, challenging MMS's decision to issue the lease on the basis of, among other things, its failure to properly identify historic properties, analyze the negative impacts of the proposed project on those properties, or afford parties such as ACHP an appropriate opportunity to comment and consult on those impacts, as well as MMS's termination of the consultation process prior to developing any means to avoid or mitigate that harm.

EPA may not simply rely on MMS and Secretary Salazar's decision not to follow the ACHP's recommendations. Rather, EPA must itself either acknowledge or expressly adopt Secretary Salazar's response, or issue its own response to the ACHP letter. The regulations at 36 C.F.R. § 800.7(a) provide that an agency official, the SHPO or tribal representative, or the ACHP may determine that further consultation will not be productive and terminate consultation. "Any party that terminates consultation shall notify the other consulting parties and provide them the reasons for terminating in writing." *Id.* However, the act of termination removes *only* the terminating party from the section 106 responsibility. Since EPA requested and was given status as a cooperating agency for purposes of section 106, it has a duty to continue the consultation process, or must itself terminate its involvement in the process.

This is especially true given that EPA has been involved in virtually none of the section 106 consultation process to this point. It did not properly designate MMS as lead agency for section 106 review, and avoided any section 106 compliance until the process was terminated and such compliance rendered moot. Because there was not a proper or adequate designation of MMS as lead agency for purposes of EPA's federal requirements, EPA is expressly responsible for completing its own section 106 review.

EPA has an independent duty to comply with the Endangered Species Act

EPA also has an independent duty to comply with the Endangered Species Act (ESA), 16 U.S.C. §§ 1531 *et seq.* The current ESA record does not apply to the EPA's OCS APA. This means that EPA must initiate ESA section 7 consultation for the effects of its actions on both bird and whale species.

The ESA was enacted to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." *Id.* § 1531(b). The ESA defines the term "conservation" as the use of "all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided [by the ESA] are no longer necessary" – that is, to recover species so that they no longer need ESA protection. *Id.* § 1532(3). The ESA requires the Secretary of the Interior to issue regulations listing species as "threatened" or "endangered" based on the present or threatened destruction, modification, or curtailment of a species' habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; disease or predation; inadequacy of existing regulatory mechanisms; or other natural or manmade factors affecting the species' continued existence. *Id.* § 1533(a)(1).

Once listed as threatened or endangered, a species receives a number of important protections. First, under the ESA and its implementing regulations, it is illegal for anyone to "take" an endangered or threatened species. *Id.* § 1538(a)(1); *see also* 50 C.F.R. §§ 17.21, 17.31. The term "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." 16 U.S.C. § 1532(19). Second, under section 7(a)(1) of the ESA, each federal agency must "utilize [its] authorities in furtherance of the purposes" of the ESA, *id.* § 1536(a)(1), and under section 7(a)(2), "[e]ach federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency…is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species." *Id.* § 1536(a)(2). In fulfilling these requirements, "each agency shall use the best scientific and commercial data available." *Id.*

To ensure that the mandate of section 7 is carried out, Congress and federal officials charged with implementing the ESA have established a detailed consultation process that must be followed by federal agencies whose actions may affect endangered or threatened species. Under this process, "[e]ach Federal agency shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat." 50 C.F.R. § 402.14(a). If such a determination is made, the agency must, prior to making any final

determination, enter into "formal consultation" with the U.S. Fish and Wildlife Service (FWS) by requesting that FWS issue a "biological opinion as to whether the action, taken together with cumulative effects, is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat." *Id.* § 402.14(g)(4); *see also* 16 U.S.C. § 1536(b).

When FWS concludes that agency action may result in incidental take that does not rise to the level of jeopardy to the entire species, FWS must issue a statement as part of a biological opinion that specifies the impact of the incidental take and sets forth the terms and conditions with which the action agency and private applicants must comply. *Id.* § 1536(b)(4).

The current ESA record does not cover this action by the EPA. EPA is correct in asserting that it is named a cooperating agency of sorts for purposes of the FWS Biological Opinion. *See*, *Fact Sheet – Outer Continental Shelf Air Permit Approval: Cape Wind Energy Project*, at page 51. However, neither the FWS Biological Opinion, nor the National Marine Fisheries Service (NMFS) Biological Opinion, both of which are included in Appendix J to the January 2009 FEIS, includes any discussion of EPA's OCS APA. While the FWS Biological Opinion purports to cover EPA, it does not reflect the actual subject of EPA's decision and need for consultation. The NMFS Biological Opinion does not reference EPA at all. Both Biological Opinions are solely and exclusively focused on the MMS determination of whether to offer an OCS lease, and are too narrow in scope to adequately consider the air quality factors critical to EPA's current decision that are necessary to meet the section 7 consultation requirement.

Moreover, both of the Biological Opinions are defective, and both MMS and FWS have been sued for their failure to comply with the ESA. MMS unlawfully allowed CWA to dictate the terms of the incidental take statement for impacts to birds. It did so by overruling the FWS's recommendation, relying instead on a flawed economic argument by CWA. Neither FWS nor MMS questioned CWA's erroneous and self-serving claim that the temporary project shutdown required to protect birds would destroy the viability of the proposed project. EPA should not allow CWA or political interference to perpetuate this error; rather, the ESA demands that the best available science control agency decisions. *Id.* § 1536(a)(2). EPA therefore must initiate, from the beginning, a new ESA section 7 compliance, which would require a new formal consultation with FWS and NMFS. This is particularly important because EPA's permit is necessary for the project to proceed. All species impacts are therefore attributable to EPA's decision whether to issue the OCS APA.

In the course of approving this project, MMS consulted with FWS on CWA's application to construct and operate the proposed project in federal waters traversed by federally endangered Roseate Terns and in close proximity to the beaches where threatened Piping Plovers nest. In its Biological Opinion, FWS determined that the wind power facility will kill at least 80 to 100 Roseate Terns and up to ten Piping Plovers over the first twenty years of the project. FWS estimated those expected levels of take based on the same data the agency had previously dismissed as insufficient to measure the proposed project's impacts on birds. In comments on MMS' DEIS for the project earlier that same year, FWS stated that the "paucity of site-specific information" on migratory birds prevented MMS from accurately characterizing the project's

environmental impact. Without collecting additional data, requiring the developer to do so, or adopting a precautionary approach and giving the benefit of the doubt to the federally listed species, FWS used the *same data* to project the levels of take that it determined did not rise to the level of jeopardy to the species under the ESA. Further, the agency ignored its own previously published interim guidance on avoiding and minimizing wildlife impacts from wind turbines. Finally, even though FWS had found that CWA should shut down the turbines on a temporary and seasonal basis to reduce bird kills, it did not require such mitigation as a term and condition of the incidental take authorization in the draft Biological Opinion because MMS and CWA rejected a shutdown as too costly. FWS never made an independent finding of whether a temporary shutdown would be reasonable and prudent under the circumstances, but rather outright rejected the measures in the final Biological Opinion based solely on the resistance of MMS and the lease applicant.

In short, the ESA section 7 consultation conducted between MMS and FWS was incomplete and faulty, and based on improper and inadequate data. It therefore cannot be used as the foundation for federal agency decision-making. Furthermore, while EPA claims that the OCS APA is covered by the consultation with MMS, the record indicates that this is not the case. At a minimum, EPA is under an obligation to contact FWS for a list of listed species potentially affected by the OCS APA, and must complete a Biological Assessment.

Thank you for your consideration of these comments.

Very truly yours,

Audra Parker
President and CEO

4 Barnstable Road, Hyannis, Massachusetts 02601
▫ 508-775-9767 ▫ Fax: 508-775-9725

Alliance to Protect Nantucket Sound

Comments on the Cape Wind Project
Outer Continental Shelf Air Permit Review

Submitted To:
Environmental Protection Agency Region 1

July 16, 2010

Alliance to Protect Nantucket Sound Comments on the Cape Wind Project Outer Continental Shelf Air Permit Review

Exhibit List

1. Letter from R. Varney, Environmental Protection Agency Regional Administrator, to Col. B. Osterndorf, U.S. Army Corps of Engineers (April 5, 2002).

2. Letter from R. Varney, Environmental Protection Agency Regional Administrator, to J. Bennett, Minerals Management Service (April 21, 2008).

3. Excerpts from Comments on the Cape Wind Draft Environmental Impact Statement from the Alliance to Protect Nantucket Sound, to the Minerals Management Service (April 21, 2008).

4. Comments on the Cape Wind Final Environmental Impact Statement Alternatives Analysis from the Alliance to Protect Nantucket Sound, to the Minerals Management Service (Sept. 24, 2009).

5. Comments on the Cape Wind Environmental Assessment and Finding of No Significant Impact from the Alliance to Protect Nantucket Sound, to the Minerals Management Service (April 7, 2010).

6. Letter from A. Parker, Alliance to Protect Nantucket Sound, to M. Bromwich, Bureau of Ocean Energy Management, Regulation and Enforcement (June 23, 2010).

7. Letter from S. Perkins, Environmental Protection Agency, to A. Krueger, Ph.D., Minerals Management Service (Dec. 1, 2009).

8. Letter from A. Krueger, Ph.D., Minerals Management Service, to S. Perkins, Environmental Protection Agency (Dec. 15, 2009).

April 5, 2002

Colonel Brian E. Osterndorf
District Engineer
United States Army Corps of Engineers
696 Virginia Road
Concord, Massachusetts 01742-2751

RE: Cape Wind Project Draft Environmental Impact Statement Scoping Comments

Dear Colonel Osterndorf:

EPA New England appreciates the opportunity to comment on the scope of analysis for the preparation of a Draft Environmental Impact Statement (DEIS) for the Cape Wind Associates, LLC (Cape Wind) proposal to construct a wind-powered electrical generation facility (wind farm) in Nantucket Sound off the coast of Cape Cod, Martha's Vineyard and Nantucket. Based on the applicant's information, we understand that the project will feature 170 wind turbines spread across 28 square miles of Nantucket Sound that would produce up to 420 megawatts of energy. The 426 foot tall turbines would produce energy that would be transmitted via submarine cables to an electrical service platform where it would be converted and transferred to Cape Cod via two 115KV submarine cables. While preparing these comments, EPA has reviewed applicant-generated information contained in its application to the Corps of Engineers (Corps) for Section 10 authorization and recent comments offered by a number of state and federal agencies, as well as the public. This letter sets forth our specific concerns about the scope of analysis for the DEIS.

EPA commends the Corps for deciding early on that an EIS should be prepared pursuant to the National Environmental Policy Act (NEPA) to support decision-making regarding the Cape Wind proposal to construct a wind farm in Nantucket Sound. That decision paves the way for a comprehensive analysis of this challenging and precedent-setting project. In addition, EPA fully supports the efforts of the Corps and the Massachusetts Executive Office of Environmental Affairs to integrate their respective reviews within a combined DEIS/DEIR under NEPA and Massachusetts Environmental Policy Act (MEPA). This joint review should improve the public review process and streamline the environmental review for the project.

The Corps-sponsored scoping sessions were well attended and featured a valuable transfer of questions, concerns and suggestions about both the project and the types of information that should be included in the DEIS/DEIR. Discussion at each meeting demonstrated significant public interest in a comprehensive evaluation. Continued interagency coordination across federal, state and local jurisdictions will be critical for ensuring that the DEIS/DEIR adequately informs the various regulatory reviews that will follow.

As you know, the generation of electricity from fossil fuels is the single largest industrial source of air pollution in New England. Because of these fossil-fuel power plant emissions, New England continues to experience too many days of unhealthy air and too much degradation of the

environment, including acidification of lakes and streams, mercury deposition, visibility impairment, greenhouse gas emissions, and excessive nitrogen loading to our ecosystems. In addition, apart from air emissions, fossil fuel burning power plants can cause environmental harm from their withdrawal of cooling water from, and their discharge of heated water to, the region's waterways. There are also many adverse environmental impacts associated with the extraction, refining and transportation of fossil fuels to be used in the New England market. Consequently, EPA New England strongly supports an increase in the amount of electricity generated in the region from renewable resources such as wind power. However, no shift to renewable energy, either through the development of this or any other project, can be made without a complete understanding of the environmental impacts and tradeoffs associated with each alternative.

EPA looks forward to coordinating with the Corps and other local, state and federal interests as work is done to determine the appropriate scope of analysis for the project and as specific investigations are developed to gauge the level of impact associated with each alternative under consideration. Off-shore wind farm operations, such as the one proposed by Cape Wind, raise a number of public policy concerns and environmental questions that must be carefully addressed. These issues are summarized below.

Determination of the Range of Alternatives

The Council on Environmental Quality's (CEQ's) regulations implementing NEPA at 40 CFR Part 1502.14 explain that a reasonable range of alternatives should be presented and compared in the DEIS to allow for a "clear basis for choice among options by the decision maker and the public." Moreover, CEQ's "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations" explain that "Section 1502.14 requires the DEIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant."

Framing an appropriate purpose and need statement is a key element in the development of a range of alternatives for analysis, as the alternatives flow directly from it. The proponent's application states that the project's purpose is "to generate up to 420 MW of clean, renewable wind-generated energy that will be transmitted and distributed to the New England regional power grid, including Cape Cod and the Islands...." While we think the applicant's proposed purpose statement is a good starting point, we recommend it be modified to make it less constraining for the purposes of the NEPA analysis and determining the range of alternatives to be investigated in the DEIS/DEIR. As a starting point, we suggest that the purpose statement be modified by striking the words "clean" (as it is somewhat vague and open to interpretation) and "wind-generated" (too limiting) and the phrase "including Cape Cod and the Islands..." (as a geographic aspect is implied in the New England Power Grid component of the statement).

Finally, we suggest that specific reference to a particular size for the project be dropped from the purpose statement and that it be replaced with language descriptive of a commercially viable renewable energy facility. With these changes, the basic project purpose statement would read, "The project's purpose is to develop a commercially viable renewable energy facility that will generate electricity distributed to the New England regional power grid."

EPA looks forward to working with the Corps and other federal agencies in a cooperative fashion to establish an appropriate basic project purpose through the Highway Methodology Process. The characterization of need provided by the applicant should be fully supported by the analysis provided in the DEIS/DEIR. Following that step, the agencies should work closely to agree on an acceptable range of alternatives to be considered in the DEIS/DEIR. At this point the range of alternatives could include renewable energy generation from a number of sources of different sizes/generation capacities, both on and offshore, or combinations of sources/types of facilities, that would supply power to the New England power grid. The analysis should fully analyze the rate of development of new wind technology and the likelihood that currently infeasible alternatives may become feasible in the near future (e.g., placement of turbines in deeper waters). The alternatives list would also, of course, include the applicant's proposal as well as the No-Build scenario.

Analysis of Alternatives

Once a complete list of alternatives is identified, the Corps should consider developing an interagency work group (including federal and state participation) to develop screening criteria, tailored to this case and linked directly to the statement of purpose and need, that will support decisions to eliminate or retain alternatives for additional analysis in the DEIS/DEIR. As alternatives advance through the screening process we expect that increasing levels of information and analysis will be necessary to evaluate tradeoffs and to support decision-making.

The Corps' analysis of alternatives will require a thorough and independent examination of the applicant's claims regarding a number of factors including:

- project size and proposed site;
- project need;
- potential benefits;
- potential costs/impacts; and,
- renewable energy technology.

At this point, the economics of the project are poorly understood and a greater level of information will be necessary to evaluate the proposed alternative as well as other alternatives that could achieve the project purpose. The discussion of alternatives should include the impact on electricity rates in New England and a discussion of fuel diversity, and the potential for future supply constraints, reliability problems, and price increases associated with over-reliance on a particular fuel source.

A thorough assessment of the relative environmental tradeoffs of each alternative should be provided in the DEIS/DEIR. As you know, the record is brimming with a wide range of important and thoughtful comments offered by our federal and state colleagues as well as by industry groups and the public. Each of these comments must be carefully considered during the development of the scope for the DEIS/DEIR. At this point in the scoping process the list of potential impacts that should be addressed is lengthy. While we recognize that the consideration of impacts must be tailored for each alternative under consideration, it currently appears that the list of issues to be explored includes: avian impacts, marine impacts (to recreational and commercial fisheries, marine mammals, benthic habitat, circulation, physical conditions, and overall ecology), visual impacts, noise and vibration impacts, aviation impacts, impacts to communication/transmission networks, commercial and recreational navigation/use, and direct and secondary impacts to the local/regional economy (recreation, tourism, fishing, coastal property values, etc.).

The analysis should discuss the environmental benefits/avoided impacts of alternatives under consideration when compared to each other and to other forms of non-renewable energy production. For example, the discussion should include avoided upstream environmental impacts associated with the mining of coal, the drilling for oil and natural gas, the refining of petroleum, and the transportation of these materials to New England. Other issues that should be part of the comparison include hazardous material usage and storage, thermal loads associated with fossil fuel fired plants, and the potential for impacts such as impingement and entrainment of fish and larvae in cooling water intakes at fossil fuel-fired plants. In addition, the analysis should describe the situations where an alternative might displace other forms of energy generation and the relative impacts/benefits of such a shift in energy production.

The DEIS/DEIR should establish a baseline from which impacts of the project alternatives can be discerned and evaluated. The same baseline information should then also be used going forward to evaluate the impacts of any project that may be constructed. The tradeoff analysis should also consider emissions offsets from criteria pollutants and CO_2 and the relative environmental costs incurred and avoided from the development of various forms of renewable energy. The tradeoff analysis should also address the environmental and societal impacts of climate change on the ecosystems being studied in the course of developing the EIS, and the incremental role that each renewable carbon-neutral energy generation project can play in mitigating those impacts. During the course of a recent interagency discussion, the Corps suggested that "topic specific" working groups would help focus the discussion on particular issues as the DEIS/DEIR is developed. We think this idea has merit and should be pursued.

serious analysis of this private use of public trust resources for renewable energy development on the OCS. Several strategies to deal with the existing policy void are apparent:

- The Corps could proceed with the current DEIS/DEIR analysis in a manner that fully incorporates the results of ongoing decision-making of the interagency work group and/or subsequent legislative action;
- In recognition of the pressing need for clear public policy on this issue, and in view of the fact that multiple wind power proposals are under consideration for New England offshore waters, the Corps or another appropriate agency (e.g. the Department of the Interior) could develop a programmatic EIS that takes a comprehensive look at potential sites for offshore renewable energy development and provides information that can then be used for site specific applications for individual projects;
- The Corps could proceed with the DEIS for this project absent an external process to deal with the lack of clear policy–in this instance the Corps would conduct its own comprehensive investigation of public trust issues associated with the project and its alternatives.

We believe that an analysis with no consideration of public trust issues and absent any national policy/regulation that governs the use of OCS lands for renewable energy generation is not an appropriate option. EPA is concerned with the lack of policy/regulation and recommends that the agencies meet to discuss the various options to develop an appropriate strategy. We also recommend that the Corps consider coordinating with the Council on Environmental Quality on this challenging issue. EPA looks forward to reviewing the Corps' draft scope of work for the DEIS with particular attention to this fundamental issue and to future discussions about the merits of various approaches.

Coordination/Communication

Close interagency coordination throughout the preparation of the DEIS/DEIR is critical. To that end, EPA intends to work as a cooperating agency to help define the scope of analysis and to offer input on how specific issues should be addressed in the DEIS. We encourage the Corps to keep an open dialogue with local, state and federal agency representatives throughout the process, with particular attention to agencies such as the Cape Cod Commission that have a long history representing the interests of the resident population that feels it would be most impacted by the applicant's proposed project. The communication strategy should include updates on the DEIS at important milestones, as public policy around the use of the OCS evolves, and should consider the release of relevant study findings as they become available. The work by the Corps so far during the scoping process bodes well for an open public process.

Finally, we suggest that the Corps distribute a draft of the final scope for the DEIS to the interagency group to make sure that there is general consensus on the scope of alternatives and the impact analysis. We are willing to work with Corps staff to help facilitate this effort if necessary and we look forward to participating in upcoming interagency coordination meetings and reviewing draft documents as appropriate and as our resources allow. We hope that the

Corps will allocate sufficient resources to support a comprehensive analysis and independent review of applicant generated information/analysis that will be incorporated into the DEIS. Should you have any questions or wish to discuss our concerns, please contact me or Timothy Timmermann of EPA New England's Office of Environmental Review at 617/918-1025. Thank you for the opportunity to provide scoping comments.

Sincerely,

Robert W. Varney
Regional Administrator

cc:

The Honorable Edward M. Kennedy, U.S. Senate
The Honorable John F. Kerry, U.S. Senate
Representative William Delahunt
Secretary Robert Durand, Executive Office of Environmental Affairs
Margo Fenn, Cape Cod Commission
Michael J. Bartlett, United States Fish and Wildlife Service
Peter D. Colosi, National Marine Fisheries Service
Barry Drucker, United States Department of Interior
Albert Benson, United States Department of Energy
J. Mark Robinson, Federal Energy Regulatory Commission
Thomas W. Skinner, Massachusetts Office of Coastal Zone Management
Vincent Malkoski, Massachusetts Division of Marine Fisheries
Charles J. Natale, Jr., Environmental Science Services, Inc.
Len Fagan, Cape Wind Associates, LLC

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

OFFICE OF THE
REGIONAL ADMINISTRATOR

April 21, 2008

James F. Bennett
Chief, Branch of Environmental Assessment
Minerals Management Service
U.S. Department of the Interior
381 Elden Street
Mail Stop 4042
Herndon, VA 20170

Re: Cape Wind Energy Project Draft Environmental Impact Statement, January 2008 (CEQ #20080019)

Dear Mr. Bennett:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, we have reviewed the Draft Environmental Impact Statement (DEIS) for the Cape Wind Energy project in Nantucket Sound off the coast of Massachusetts.

The DEIS details Cape Wind Associates, LLC's proposal to install a wind-powered generating facility in the Horseshoe Shoal region of Nantucket Sound consisting of 130 wind turbine generators (WTGs), an electrical service platform (ESP), and a 12.5 mile long submarine transmission cable system from the ESP to landfall in Yarmouth, Massachusetts. Each WTG will be 440 feet tall at its highest point and the steel framed ESP will have a footprint of approximately 100 feet by 200 feet and will be constructed approximately 39 feet above the water surface. The wind turbines and ESP will occupy 25 square miles of Nantucket Sound in an area known as Horseshoe Shoal and will be approximately 5.2 miles from the closest point of land--Point Gammon on Cape Cod. The bathymetry of Nantucket Sound is irregular with charted water depths ranging between one and 70 feet. According to the DEIS the project will be capable of producing an average generation capacity of approximately 182 megawatts (MW).

EPA has been involved in the review of the Cape Wind project since 2001 when the U.S. Army Corps of Engineers served as the lead federal agency with the responsibility for preparation of the EIS for the project. The passage of the Energy Policy Act of 2005 amended the Outer Continental Shelf Lands Act and established the Department of the Interior as the lead agency (through the Minerals Management Service (MMS)) for the review (under NEPA) of renewable energy sources. The purpose of the proposed project, as described in the DEIS, is to provide an alternative energy facility using wind resources

off the coast of New England to make a substantial contribution to enhancing the region's electrical reliability and achieving renewable energy goals under Massachusetts and regional renewable portfolio standards (RPS).

The focus of the DEIS on both the Massachusetts and regional RPS goals reflects changes that have occurred since the publication of the previous DEIS by the Corps. Namely, all six New England states now have enacted RPS programs to promote the development of renewable energy sources. Near-term projections by the Massachusetts Division of Energy Resources and others predict that there will be available supply to meet the RPS requirements in Massachusetts in 2008. However, in later years as mandated demand for renewables from other states in the region accelerates at an increasing rate, projections by state and regional energy officials indicate that the region will face shortages of renewable energy supplies. According to ISO New England's Regional System Plan for 2007, in order to meet the projected growth in RPSs of the New England states, the region needs significantly more renewable electricity projects than those which have currently applied for interconnection to the power grid. Specifically, in 2016 over 18% of New England's electricity supply will be required to come from a combination of renewable and energy efficiency resources. To date, if all projects that have applied for interconnection with ISO New England, including Cape Wind, are permitted and built, the region would be at about 14.5%.

There are a number of state policies and requirements in New England and the northeast that underscore the need for renewable energy. First, through their 2001 Climate Change Action Plan Agreement, the New England Governors and Eastern Canadian Premiers have set goals for reducing greenhouse gas emissions. Specifically, these goals call for reductions to be made to 1990 levels by 2010, and to 10% below 1990 levels by 2020. In the long-term, overall reductions of 75% to 80% below 2003 levels may be required.

In addition to the regional plan, Governors and state legislators have adopted state specific goals and timelines for reducing greenhouse gas emissions through a combination of energy efficiency, renewable energy, and cap and trade programs. Also, both the Clean Air Interstate Rule (CAIR) and the Regional Greenhouse Gas Initiative (RGGI) will be imposing regulatory schemes to limit NO_x and CO_2 emissions, respectively. Given these emission caps, new supplies of clean energy are critical for meeting the region's increasing demand for electricity. In addition, in March 2008, EPA issued a revision to the 8-hour ozone standard, creating a further need on the part of the Northeast states to reduce NOx emissions which contribute to the formation of ozone. These federal and state policies are combining to push further development of non-emitting electricity generation resources that either produce zero emissions or considerably lower emissions than the current fleet of power plants.

The Cape Wind project could make a substantial contribution to the significant need for additional renewable energy sources in the region. The massive scale of the project underscores the importance of a comprehensive consideration of alternatives, impacts and appropriate mitigation in the EIS. As you know, EPA submitted scoping comments asking MMS to incorporate and fully consider our previous comments on the Corps 2005

DEIS as well as the original scoping comments and comments we offered on the scope of work for the Corps EIS. Our comments on the Corps DEIS noted that it did not provide enough information to fully characterize baseline environmental conditions and environmental impacts of the proposed project, and did not adequately consider alternatives to avoid or minimize impacts. We reviewed the current DEIS with those comments in mind and continue to believe that it is critical for MMS to develop that information to support a decision of whether the project is environmentally acceptable and in the public interest. While the DEIS improves upon the Corps' DEIS, we believe additional work is needed, in close coordination with the cooperating agencies, between now and the issuance of the FEIS. Our detailed comments on the DEIS are provided in the attachment to this letter.

Based on our review of the DEIS, and for the reasons discussed in the attachment, EPA has rated this DEIS as "EC-2, Environmental Concerns—Insufficient Information" in accordance with EPA's national rating system, a description of which is attached to this letter. As required by the Council on Environmental Quality's NEPA regulations (40 CFR 1501.6) MMS should respond to specific comments and use proposals provided by EPA and other agencies with jurisdiction by law or special expertise. We strongly encourage MMS to work more closely with EPA and other agencies during the development of the FEIS. Please feel free to contact me or Timothy Timmermann of the Office of Environmental Review at 617/918-1025 if you wish to discuss these comments further.

Sincerely,

Robert W. Varney
Regional Administrator

Enclosure

cc:

Governor Deval Patrick
Senator Edward Kennedy
Senator John Kerry
Representative William Delahunt
Michael Bartlett, United States Fish and Wildlife Service
Patricia Kurkul, National Marine Fisheries Service-Northeast Region
Paul Niedzwiecki, Cape Cod Commission
Jim Gordon, Cape Wind

Summary of Rating Definitions and Follow-up Action

Environmental Impact of the Action

LO--Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC–Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO–Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU–Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1–Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2–Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3–Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

Additional Detailed Comments
Minerals Management Service DEIS for the Cape Wind Energy Project

Alternatives

EPA's previous comments on the Corps' EIS as well as during scoping of this EIS recommended the consideration and analysis of smaller scale alternatives and a phased project alternative as it was not clear from the analysis provided at that time whether smaller projects could achieve the project purpose while also potentially reducing the overall impact of the project. While a smaller scale project would not provide as much renewable energy as the Cape Wind proposal, it could still contribute toward achieving the region's RPS requirements and thus is reasonable to consider in the analysis comparing the energy and environmental tradeoffs of alternatives. The MMS DEIS considers both a smaller scale alternative (at one half the size of the Cape Wind proposal) and a two phase alternative project, both of which would be constructed in the Horseshoe Shoal region of Nantucket Sound. Based on our review of the DEIS, it is not clear how the scale of the smaller Project was established and whether it was based on economic considerations (for example where up front project capital costs were expected to equal project revenues) or other factors. The FEIS should address this issue and whether this or another intermediate size alternative would perform substantially better economically or environmentally. We note that discussions about the economic viability of the smaller scale project are complex given statements in the DEIS that the proposed project and other sites are not economically viable at this point in time. In addition, the alternatives analysis should discuss the current research into and development of deepwater offshore wind technologies in light of the recent proposal by Blue H Technologies BV.

Establishment of Baseline Conditions and Projections of Project Impacts

We continue to believe that it is critical for project impacts to be compared to a comprehensive baseline. With such a baseline, the impacts of the project alternatives can be measured and mitigation and monitoring protocols developed. During scoping and in our previous comments on the Corps DEIS in 2005, EPA specifically requested that the DEIS clearly indicate what information was requested by expert agencies to establish baseline conditions, and, if those agencies' advice was not followed, explain the basis for such a decision. We continue to believe it is essential for MMS to directly address comments from federal agencies with expertise and jurisdiction over various aspects of the project, specifically the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration as required in the Council on Environmental Quality's (CEQ's) NEPA regulations (see 40 CFR 1501.6(a)(2) and 1502.9(a) and (b)). This is especially important on the critical issue of impacts to avian species.

The DEIS indicates that all previous comments on the Corps DEIS were incorporated as scoping comments. Lacking a specific comment/response summary it is difficult to determine how fully the agency/expert advice was incorporated into the analysis. It would have been helpful if the DEIS had included a comment response section that specifically addressed relative comments already on the record in response to the Corps

EIS for the project. The FEIS should specifically reference the comment or technical advice received in response to the DEIS and provide information to demonstrate how the comment/concern was addressed.

Marine Issues

Entrainment losses
The DEIS acknowledges that there will be entrainment mortality to ichthyoplankton from jetting operations and from the normal operation of vessels associated with the construction and maintenance of this project. The DEIS dismisses these losses as insignificant without any quantification of the water use or entrainment losses. At a minimum, the FEIS should provide an estimate of water volumes entrained by the jetting operations and vessels associated with the project. Ideally it would use these volume estimates in conjunction with site-specific ichthyoplankton data to estimate the losses of fish eggs and larvae.

Pollutant Discharges
EPA notes that a Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit may be needed to authorize any discharges (including thermal discharges) and cooling water withdrawals by the jack-up construction barges when they are in jack-up mode. EPA looks forward to discussing this with MMS and the project proponent in the coming weeks. The FEIS should reflect the results of this coordination and should also fully characterize the operation of the jack-up construction barges. This characterization should explain how the equipment works in its different modes of operation, including a description of the type and amount of any pollutants that will be discharged or otherwise released to the water by the barges, and a description of the amount of water that the barges will withdraw from the ambient environment, if any, and an explanation of the purpose of any such water withdrawals.

Please also note that in section 5.1.1.1.2 one portion of the text appears to need editing. The last line in that section reads, ". . . avoid only deck drainage discharge . . .," but probably should say ". . . avoid any deck drainage discharge . . ."

Oil Spill Management
Under a Memorandum of Understanding cited in 40 CFR Part 112, Appendix B, the jurisdiction for oil spill incidents seaward of the coastline lies with the Department of the Interior. However, all agencies of the United States, including EPA, have a common interest in protecting these waters and shores. Therefore we offer the following suggestions and observations relative to oil spill management issues for the project.

The Department of Interior MMS regulations at 30 CFR 254, "Oil Spill Response Requirement for Facilities Located Seaward of the Coastline" require that an Oil Spill Response Plan be developed, and that the plan be submitted to MMS for approval prior to the facility beginning operation. The DEIS refers to these regulations and also states that a plan will be developed, but no plan was included in the DEIS.

In December 2005, a *Draft Oil Spill Response Plan* was prepared for the Corps' EIS. That plan is available on-line.[1] The December 2005 *Draft Oil Spill Response Plan* appears to closely follow the prescribed MMS format and appears to be adequately developed, given the status of the project at that time. We recommend that the FEIS contain a copy of the Oil Spill Response Plan for review and comment. Based on our review of the December 2005 plan we recommend that plan provide the following additional information:

- Information on the specific types and quantities petroleum products that will be used and stored at the various structures of the facility. This information is important because different products have different chemical and physical characteristics that may impact cleanup strategies and risk to the environment.

- A description of the specific strategies that will be used to respond to a spill into water. For example, will oil boom (containment or deflection) be used? If so, how many feet of boom are required to contain the worst case spill? Also, where will boom be deployed and how will it be anchored? Where will boom be stored and staged and how will it be deployed? If boom will not be used, what other mitigations are proposed?

- What are the sensitive areas to be protected?

- How are the sensitive areas prioritized? The FEIS should describe the decision making process used in determining these priorities.

Scour Control

EPA recommends the use of scour control mats over rock armoring around the WTG monopiles. The scour control mats have a significantly smaller footprint of direct impact and they more closely match the existing benthic conditions at each location. The FEIS should provide additional information on the long term durability of the scour control mats and discuss anticipated replacement/maintenance.

Fish Landscape Ecology

The DEIS concludes that the proposed WTGs would be placed too far apart to have anything more than localized effects on fish aggregation (DEIS page 5-149). The DEIS draws this conclusion based on a single citation from a commercial website. That website describes in very general terms artificial reef placement in the Gulf of Mexico and Florida, but it does not quantitatively analyze the effect of reef design and spacing on fish aggregation. With the implementation of marine reserves, there have been numerous scientific peer-reviewed papers published on the landscape ecology of marine fish. One key consideration is adjacent habitat types that may complement or serve as a conduit for species between reefs. Many papers have shown that adjacent seagrass habitat has a significant positive effect on fish abundance on reefs. As evidenced by Figure 4.2.2-1, Horseshoe Shoal has a diversity of benthic habitats onto which the turbines with associated scour control will be placed. As a result there will likely be some level of habitat connectivity between naturally occurring benthic habitats and the WTGs. In

[1] http://www.capewind.org/downloads/feir/Appendix2.0-C.pdf

addition, the planned distance between turbines (629 to 1,000 meters) is certainly within the normal foraging range for a wide variety of fish, marine mammals, and sea turtles. The FEIS should look to relevant research on marine reserves to better assess the landscape effects of placing the proposed structures on Horseshoe Shoals.

Sea Turtles

EPA agrees with the DEIS conclusion that the WTG monopiles have the potential to attract loggerhead and Kemp's ridley turtles (page 5-168). On page 5-206, the DEIS concludes that recreational fishing may be enhanced by the turbines and on page 5-209, the DEIS states that commercial trawling will still be possible in and around the turbines. EPA is concerned that turtles that are attracted to these areas may be at higher risk for injury or mortality due to vessel strikes or as a result of recreational or commercial fishing. The FEIS should explore this issue more fully.

Construction Noise

The FEIS should provide additional discussion of methods for minimizing pile driving noise impacts on marine organisms. For example, the FEIS should explain the tradeoffs (from an impacts and construction standpoint) of a modification to the construction schedule limiting construction impacts to one season (rather than two) by installing more than one WTG at a time. This analysis should incorporate the recommendations and expertise of NOAA.

The cumulative impacts subsection on noise (DEIS pages 6-17/18) makes seemingly contradictory statements about the impacts of pile driving noise on marine mammals. The subsection conclusion makes no mention of impacts to marine organisms even though Section 5.3.2.6 indicates that the proposed project may result in acoustical harassment of marine mammals. The FEIS should correct this discrepancy.

Decommissioning

The DEIS projects the anticipated lifespan of the WTGs at 20 years. The FEIS should identify the anticipated lifespan for the transmission cables and scour protection and whether this span will affect the overall lifespan of the project. Also, the FEIS should describe whether there would be any environmental advantage/disadvantage to removing the transmission cables and scour protection at the end of the project life versus leaving them in place.

Other Marine Specific Comments

1. DEIS page 5-3: The FEIS should derive a rough estimate of the volume of grey water/black water to be discharged by project vessels.
2. DEIS page 5-4: The FEIS should explain how floating debris and trash generated by the project and associated vessels will be minimized.
3. DEIS page 5-57: EPA strongly supports the use of freshwater as a drilling fluid in the Horizontal Directional Drill (HDD). In addition, EPA supports the currently described plans to isolate and recover any bentonite used in the drilling process.

4. DEIS page 5-75: EPA supports the pre-construction mapping of seagrass and believes that this is most appropriately done in July, the time of peak biomass for this latitude.
5. DEIS page 5-116,117: It has been EPA's experience with recent pipeline projects that full benthic recovery to a community similar to pre-construction condition may take longer than anticipated by current scientific literature. Monitoring of soft bottom benthos in Massachusetts Bay shows that even after 3+ years, the impact areas are statistically different from reference locations.
6. DEIS page 5-117: The FEIS should explain whether scour mats need maintenance/replacement. Also, the FEIS should explain whether the density of fronds on the scour mats optimized for sediment deposition and if it is anticipated that the scour mats will support a biological community similar to what is found in natural SAV meadows. The basis for any conclusions presented should be provided in the FEIS.
7. DEIS page 5-118: DEIS suggests that rock armoring will on average be buried over time by natural forces with sand. It has been EPA's experience with several recent projects that achieving precise elevations with rock is difficult and that it is reasonable to expect that there will be some exposed hard substrate at the end of construction.
8. The FEIS should explain the frequency of monitoring to determine if the cable is/remains properly buried and should describe the protocols that will be followed if a section or sections of the cable becomes exposed.
9. In general, the DEIS states that wind turbines will be spaced 629 to 1,000 meters apart. It would be helpful to know how far apart the hard substrates associated with the various scour control technologies will be as part of the discussion of the connectivity of benthic habitat.
10. DEIS page 6-10: The cumulative impact analysis should also consider water usage/entrainment losses associated with jetting and vessels within the project area.
11. DEIS page 6-11: The DEIS refers to environmental studies done at the Horns Rev and Nysted wind parks in supporting conclusions regarding impacts to fisheries. It would be helpful if the FEIS would explain the factors which make the data from those projects transferable to the proposed project (e.g., similar substrate, WTG spacing, number of WTG units, etc.).

Air Issues

In general, EPA noted some areas where the DEIS was incomplete with regard to the air issues. The following are general comments on additional analyses that MMS needs to undertake, and are followed by a series of specific comments and edits on a section by section basis.

In general, MMS needs to:

- Work with EPA to clarify whether and when different phases of the project are OCS sources under the Clean Air Act.
- Clarify what emissions from which phases of the project would be addressed by permit under the Clean Air Act.
- Conduct a conformity determination under the Clean Air Act that EPA and MMS can agree on, and that EPA can use to determine which emissions must be offset by General Conformity.
- Clarify what emissions from which phases of the project would be addressed by General Conformity under the Clean Air Act.

Given that these issues are not addressed in the DEIS, EPA offers the following specific comments on a section by section basis. Should MMS work with EPA to address the comments above prior to the issuance of a FEIS, many of the specific comments below will also be addressed.

Section 1.2.1 - Federal Review
The MMS needs conduct an air quality analysis and make a conformity determination for the project. The results of this work will determine the nature of the air permit to be developed by EPA. In several places, the DEIS discusses the likely outcome of EPA's OCS analysis under 40 C.F.R. Part 55. EPA has some limited information regarding the air quality impacts of the project from this DEIS and Cape Wind's December 7, 2007 Notice of Intent (NOI), some of which is contradictory. However, EPA has not received a permit application, and does not have sufficient information to determine which activities might constitute "OCS sources" and/or require air permits. With regard to conformity, once the air permit application has been received and the project emissions are clearly identified, EPA will be able to determine whether those emissions must be offset by General Conformity, or are otherwise covered by the OCS air permit.

Section 1.2.1.5 – Section 7627 of the Clean Air Act (CAA)
The last sentence on page 1-4 states that during the operational phase of the project, certain activities will constitute "OCS sources" and require permitting. In contrast the DEIS and Cape Wind's NOI state that the operational phase will not involve any OCS sources. See DEIS at 5-51; NOI at 2. EPA does not yet have sufficient information to make such judgments.

On page 1-5, we would suggest the following change to line 7 of the first paragraph: "whether air modeling or other information is required."

Section 2.4.3.3 – Major Repairs
Either in this section or under Section 5.2.1, please estimate, to the extent possible, the likelihood, frequency, and potential air emissions deriving from "major repairs."

Section 2.6.2 – ESP Fluid Containment
This section states that the electrical service platform will contain "emergency generators." The DEIS at page 5-61 note 2 states that while the applicant had initially planned emergency diesel generators, the current plan will not involve any emergency generators, but rather batteries, for backup power. The FEIS should resolve this inconsistency and state precisely which equipment will be on the electrical service platform, and whether any such equipment, when operated for its intended purpose, will have the potential to emit any air pollutants.

Section 4.1.5.1 - Existing Air Quality
Paragraph two of this section (DEIS page 4-23) identifies the General Conformity Regulations (40 CFR 93.150 through 93.160), which prohibit federal agencies from, in any way, supporting any activity that does not conform to an approved implementation plan. As stated on page E-1, "The applicant requests a lease, easement, right-of-way, and any other related approvals from the Department of the Interior, Minerals Management Service necessary to authorize construction, operation and eventual decommissioning of the proposed action." Thus, MMS is required to apply the General Conformity Regulations to its action.

We request that MMS clearly identify in the FEIS their obligation to evaluate General Conformity. As the DEIS indicates project emissions in the construction and decommissioning years will exceed the General Conformity *De minimis* thresholds[2], MMS should: (a) address its plans for developing the air quality conformity analysis; (b) address its plans for satisfying General Conformity (accounting for the emissions within the implementation plan or offsetting the emissions); (c) describe plans for releasing a draft general conformity determination and associated public participation process; and (d) describe plans for releasing Final General Conformity Determination.

Paragraph two (DEIS page 4-23) goes on to state, "Air emissions, within nonattainment areas, that are not covered by an air permit and that exceed the minimal levels require a conformity analysis." This statement should be revised to clarify that only air emissions covered by a "major source" air permit do not require a conformity determination.

Section 5.1.5.5 – Air Emissions
The FEIS should clarify whether the electrical service platform, not counting vessels, has any potential to emit any air pollutants. The discussion should include particular reference to emergency generators, transformers with oil/air heat exchangers, paints and paint thinners, etc. In addition, the FEIS should include a specific description of the air emissions attributable to construction of the WTGs, ESP, and cable installation.

We would also suggest that the third sentence of this section (DEIS page 5-14) be modified as follows: "The vessel emissions represent a mobile source except when

[2] The *De minimis* thresholds for a moderate 8-hour ozone nonattainment area (including Boston-Lawrence-Worcester (E. Mass), MA and Providence (all of RI), RI) is 50 tons per year of volatile organic compounds (VOC) and 100 tons per year of nitrogen oxides (NOx).

attached to the seabed and functioning as a stationary source, and are not predicted to result in a lowering of air quality ...".

Section 5.3.1.5 – Impacts on Air Quality
Under "**Regulatory Analysis**" on pages 5-50 and 5-51 we would suggest the following edits:

- First paragraph: "At the time of promulgation, ~~the regulations were intended to apply to~~ USEPA noted that the primary OCS activity was oil and gas development, ..."
- First paragraph: "However, some activities associated with the proposed action ~~are~~ may be considered an OCS source, ..."
- Add, at end of first paragraph: "On February 27, 2008, USEPA proposed a consistency update incorporating relevant Massachusetts regulations into Part 55. See 73 Fed. Reg. 10,406."
- Third paragraph: "The proposed action has at least three distinct time periods ..."
- Fourth paragraph: "The OCS equipment ~~sources~~ for the proposed action ~~would be~~ could include the vibracore . . . and the support vessels servicing ~~these OCS sources~~ the OCS source(s) ..."
- Fourth paragraph, item 1: "... ~~would~~ could be considered to be one or more OCS sources."
- Fourth paragraph, item 2: "During the two-year construction period, potential OCS sources may include the ... Potential OCS sources may include the ... Finally, potential OCS sources may include ..."
- Forth paragraph, item 3: "These barges and cranes and dredging equipment ~~would~~ could be considered one or more OCS sources."
- Fourth paragraph, item 4: "During construction and during decommissioning, or other times when an OCS source is present, emissions from ... en route to or from ~~these~~ any OCS source(s) ~~identified in items 1 through 3~~ would be counted towards the potential to emit of the OCS source(s) ~~also be regulated by the USEPA permit~~ when ..."

Construction/Decommissioning Impacts
As discussed in the DEIS, the project will result in air quality impacts offshore during the two years of construction and the two years of decommissioning. In both the Executive Summary (DEIS page E-12) and the Environmental Consequences chapter (DEIS page 5-53) the DEIS concludes that construction impacts on air quality would be minor. However, the DEIS does not present an analysis to support this conclusion and instead states that EPA, through any Clean Air Act permits that may be required, will determine whether and how air quality modeling will be conducted, and what limits and mitigation measures will be imposed. While we agree that EPA would make such determinations as part of any permit process, MMS nevertheless has an obligation under NEPA, in consultation with EPA as a cooperating agency and state environmental agencies, to analyze the project's impacts on air quality and alternative ways to minimize those impacts, and to present this analysis in the EIS for public review. We reiterate our offer to work with MMS to ensure that this obligation is met.

Section 5.3.1.5.2 – Operational Impacts

The DEIS at page 5-55 under the subheading "**Benefit Analysis for Air Quality**," moves between a discussion of capacity in New England (MW) and production (MWh). These two terms are not interchangeable, and the resulting discussion is confusing. EPA recommends that the FEIS present this information in a manner that clearly distinguishes between electricity produced in MWh, and installed generating capacity in MW.

MMS should examine the impact on air quality with regard to electricity production and the air pollution associated with that production. In particular, the second part of the first paragraph discussion on peak demand is confusing and inconsistent with the rest of the discussion since it focuses on capacity instead of production.

EPA recommends that the analysis focus on the number of MWh that Cape Wind is likely to produce–and the NO_x, and SO_2 emissions associated with other generation likely to be displaced. Given that production from Cape Wind is likely to be variable, it probably makes more sense for MMS to analyze average projected monthly production for Cape Wind and provide a range of projected average NO_x and SO_2 emission reductions. However, if MMS wants to do this analysis on a daily basis, MMS should look at average projected production per day of the Cape Wind project in MWh and compare that to the marginal emission rate for the power system. In addition, the analysis should be updated to reflect the most recent emission rates published by ISO New England. Furthermore, given the growing concern about climate change, and the state and regional goals (as noted in the cover letter), EPA recommends that the analysis address CO_2 emissions in addition to the pollutants discussed above.

Appendix B – Table 5.3.1-7, Potential Project Emissions by Major Activity

Table 5.3.1-7, Potential Project Emissions by Major Activity, should be revised to include project emissions associated with onshore activities. Additionally, the General Conformity air quality analyses must show the activities, duration/time, and emission factors used to develop the annual emissions in this table.

Appendix B – Table 5.3.1-8, Potential Project Emissions by Location

EPA appreciates Table 5.3.1-8, which attempts to quantify and categorize air emissions. However, the division into "State Waters–Rhode Island," "State Waters–Massachusetts," "OCS Covered By Permit," and "OCS Not Covered By Permit" is not entirely clear, and presumes certain judgments that EPA cannot evaluate with the present information. In addition, one entry ("Operations/OCS Covered by Permit") appears to contradict an earlier statement in the DEIS that the operation phase will not require an OCS permit.

We recommend that the air emissions be recategorized as follows:

- Onshore – Rhode Island
- Onshore – Massachusetts
- Transit – Massachusetts Waters, Beyond 25 Miles from Array Perimeter
- Transit – Rhode Island Waters, Beyond 25 Miles from Array Perimeter

- Transit – Massachusetts Waters, Within 25 Miles from Array Perimeter
- Transit – Rhode Island Waters, Within 25 Miles from Array Perimeter *(unless MMS can categorically state that no point 25 miles from the array perimeter lies within Rhode Island waters, in which case this category is unnecessary)*
- Transit – OCS Waters, Beyond 25 Miles from Array Perimeter
- Transit – OCS Waters, Within 25 Miles from Array Perimeter
- Stationary Activities – OCS or OCS Waters

Additionally, the General Conformity air quality analyses must show the activities, duration/time, and emission factors used to develop the annual emissions in this table.

Environmental Management System

We believe the concept of an Environmental Management System (EMS) for purposes of managing the mitigation measures for this project is a good one. The development of the mitigation measures and the EMS should proceed in earnest while the FEIS is being developed, not postponed until the NEPA process has concluded. In light of the importance of monitoring and mitigation for the range of impacts expected from the project, we strongly believe that MMS should establish an agency working group responsible for working with MMS to develop relevant aspects of the mitigation plan and the EMS. Many of the federal agencies are also cooperating agencies and a role in the development of the specific items to be incorporated into the mitigation plan and the EMS is a logical one for these agencies to assume. We anticipate that federal agencies work on the mitigation plan and EMS would include (but not be limited to) issues such as: monitoring and addressing air quality impacts during construction, maintenance and decommissioning; monitoring and addressing project related water quality issues; emergency response planning (including work related to spills); monitoring and addressing acoustic and other impacts to marine mammals; and evaluating/monitoring and addressing avian impacts. The results of the ongoing coordination on the EMS should be explicitly reported in the FEIS so that the EMS can be evaluated by interested members of the public.

COMMENTS OF THE

ALLIANCE TO PROTECT NANTUCKET SOUND

ON THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE
PROPOSED CAPE WIND ENERGY PLANT

April 21, 2008

CONTENTS

EXECUTIVE SUMMARY ES-1

I. BACKGROUND 1

A. The Proposed Project and Review History 2

1. The Corps's Review 2

2. MMS's Authority and Review 3

B. The Alliance to Protect Nantucket Sound 4

C. Structure of APNS's Comments on MMS's DEIS 5

II. THE PROPOSED PROJECT FAILS UNDER THE STATED PURPOSE AND NEED 7

A. The Proposed Project Is Not Needed to Assure Supply Adequacy in the New England Region 9

1. The DEIS Incorrectly Assumes There Is an Energy Shortage in New England 9

a. The Market Has Changed Making the Proposed Project Unnecessary 9

b. Implementation of the ISONE Forward Capacity Market 10

c. New ISONE Energy Supply and Needs Assessment 10

d. Forward Capacity Market Auction Results 11

2. New England Currently has Adequate Supplies of Natural Gas and a Sufficient Pipeline Infrastructure to Meet Demands 13

B. The Proposed Project Is Not Needed for the Massachusetts RPS Program or Other New England RPS Programs, and Is Not Likely to Qualify for Federal Production Tax Credits 18

1. RPS Requirement in Massachusetts 18

2. Other New England States with RPS Programs 20

3. Renewable Energy from Canada 21

4. Tax Credit 21

C. The Proposed Project Will Likely Prevent Development of Other Renewable Projects with Fewer Environmental and Social Costs 22

D. The Proposed Project Is Not Economically Viable 24

1. The Cost Estimate for the Proposed Project is Understated and Inaccurate; Even Based on the DEIS Analysis, the Proposed Project is Uneconomic and will not Clear the Market 25

2. The Proposed Project Will Increase Consumer Costs and Presents a High Risk of Failure that would Shift Project Costs to Massachusetts Consumers 28

E. The Proposed Project Will Not Provide Electricity to Cape Cod and Its Adjacent Islands and Is of No Value to These Local Communities 29

F. The Proposed Project Lacks Air Emissions Benefits 33

G. The Proposed Project Does Not Use Techology That Is "Currently Available" 34

H. Summary 35

III. THE PROPOSED PROJECT DOES NOT SATISFY EPAct, CLEAN WATER ACT, OR RIVERS AND HARBORS ACT APPROVAL REQUIREMENTS 36

A. MMS Review at this Time is Premature 36

B. Factors to Be Considered under the Section 404/Section 10 Public Interest Test and Section 388 41

C. The Impacts of the Proposed Project Should Preclude Approval by MMS and the Corps 43

1. The Proposed Project Will Negatively Impact Marine Navigation 43

2. The Proposed Project Will Negatively Impact Aviation 46

3. The Proposed Project Will Negatively Impact Public Safety 48

4. The Proposed Project Will Negatively Impact the National Security Interests of the United States 49

5. The Proposed Project Will Negatively Impact Fisheries 51

6. The Proposed Project Will Negatively Impact Protected Marine Species 53

7. The Proposed Project Will Negatively Impact Avian and Bat Species 54

8. The Proposed Project Will Negatively Impact Wetlands 57

9. The Proposed Project Will Negatively Impact Water Quality 57

10. The Proposed Project Will Negatively Impact Terrestrial Ecology 59

11. The Proposed Project Will Negatively Impact Historic Properties 59

12. The Proposed Project Will Negatively Impact Recreation Interests 61

13. The Proposed Project Will Negatively Impact the Aesthetics of the Region 62

14. The Proposed Project Will Negatively Impact the Regional Economy 62

15. The Proposed Project Will Negatively Impact Conservation Interests 64

16. The Proposed Project Will Negatively Impact the Return to the Federal Government 65

17. The Proposed Project Will Negatively Impact the Public Interest 67

D. The Application Must Be Denied Because It Fails Under the Approval Requirements 69

IV. LEGAL DEFICIENCIES IN THE NEPA/MEPA ANALYSIS 69

A. MMS Has Failed to Comply with Departmental NEPA Policy for Consensus-Based Decision-Making 71

B. The DEIS Is Not Objective 73

1. MMS Has Not Properly Insulated CWA from the Review Process 73

2. MMS Has Ignored the *Framework for Offshore Wind Energy Development in the United States* 76

3. MMS's Summary Table Assessing Impact Severity Misrepresents the Impacts and MMS's Own Analysis 78

C. MMS Has Not Complied with NEPA Purpose and Need Requirements 80

1. Legal Requirements for Purpose and Need Statements 80

2. MMS Has Crafted an Inappropriately Narrow Purpose and Need Statement 83

a. MMS Cannot Use a Description of the Proposed Project as its Purpose and Need Statement 84

b. MMS's Geographic Requirement: The Geographic Limitation is Inappropriate 86

c. MMS's Technical Feasibility Requirement: MMS's Treatment of Technical Feasibility is Out of Date, Inconsistent and Inadequately Explained 87

(i) Deep Water 87

(ii) Long-Distance Cables 89

(iii) Hydrokinetic Technologies 90

d. MMS's Economic Viability Requirement: MMS Cannot Exclude Alternatives for Failing to be Economically Viable when It Has Concluded that the Proposed Project Is Not Economically Viable 90

e. MMS's RPS Requirement: The RPS Is Already Satisfied 91

f. MMS's Substantial Contribution Requirement: MMS Has Deliberately Limited Reasonable Alternatives by Restricting Alternatives to Large-Scale Projects 92

3. Recommended Purpose and Need Statement 96

D. There Are Numerous Reasonable Alternatives that MMS Failed to Consider 96

1. There Are Numerous Offshore Wind Energy Alternative Sites in New England and the Mid-Atlantic 98

a. The Helimax Report Identifies Numerous Locations for Viable Wind Energy Projects in New England 98

b. Buzzard's Bay Proposal 99

c. The Blue H Proposal 100

d. The Rhode Island Proposal 102

e. Southern Coast of Long Island 103

2. There are Offshore Hydrokinetic Projects 103

3. New England Has Hundreds of Onshore Renewable and Clean Energy Projects of 20 MW or Larger that Are Reasonable Alternatives to the Proposed Project 106

4. Demand Response Is a Cost-Efficient, Reasonable Alternative That Should Be Considered as an Alternative to the Proposed Project 110

E. Adaptive Management Is Not Appropriate for the Proposed Project and the DEIS Discussion of Adaptive Management Is Inadequate 112

F. The DEIS Is Missing Critical Information Needed to Assess Adequately the Cumulative Effects of the Proposed Action 114

V. OTHER FEDERAL LAW ISSUES 115

A. The Proposed Project Does Not Meet Corps Requirements 115

1. The Corps Should Deny the Permits Under the Public Interest Test 119

2. The 404(b)(1) Guidelines Require that the Corps Deny the Permit 121

a. The Proposed Project is Not the Least Environmentally Damaging Practicable Alternative 122

(i) There is a Presumption that Other Practicable Alternatives are Available 122

(ii) Even Absent the Presumptions, There Are Other Less Environmentally Damaging Practicable Alternatives 123

b. The Proposed Discharge Will Result in Significant Degradation of the Aquatic Ecosystem 123

(i) The Proposed Discharge Likely Will Cause or Contribute to Violations of Applicable Water Quality Standards 123

(ii) The Proposed Discharge Will Jeopardize the Continued Existence of Endangered or Threatened Species, or Will Result in the Likelihood of the Destruction or Adverse Modification of Critical Habitat 124

(iii) The Proposed Discharge Will Significantly and Adversely Affect Aquatic Ecosystems 124

c. The Proposed Discharge Does Not Include All Appropriate and Practicable Measures to Minimize Potential Harm to the Aquatic Ecosystem 125

d. There Does Not Exist Sufficient Information to Make a Reasonable Judgment as to Whether the Proposed Discharge Will Comply with the Guidelines 127

e. The Section 404 Permit Must Be Denied 127

3. The Proposed Project Will Adversely Affect Water Quality 127

B. MMS Has Not Complied with the Endangered Species Act 128

1. MMS Has Not Complied With Its Section 7 Responsibilities 128

2. MMS's Inadequate Biological Documentation and Analyses Preclude ESA Compliance 131

3. Formal Consultation Is Required for the Proposed Project 136

C. MMS Has Not Complied with the Migratory Bird Treaty Act 138

1. The Migratory Bird Treaty Act Prohibits Unintentional Take of Migratory Birds 138

2. The MBTA Applies Beyond the Territorial Seas 140

3. The Proposed Project Will Violate the MBTA 143

D. MMS Has Not Complied with the National Historic Preservation Act 145

1. Unexplained and Unjustified Rejection of Thirteen Adverse Effect Findings 146

2. Insufficient Planning to Minimize Harm to NHLs 147

3. Insufficient Identification of Historic Properties 149

4. Insufficient Assessment of Effects 151

5. Lack of Consultation with Indian Tribes Regarding Historic Properties Off Tribal lands 152

E. The Proposed Project Will Violate the MMPA 152

F. The Coast Guard Has Not Complied with Section 414 of the Coast Guard Act 155

VI. STATE LAW ISSUES 156

A. The Permit Must be Denied Under the CZMA Because the Proposed Project Is Inconsistent with the Massachusetts Coastal Zone Management Plan 156

1. Cape Wind Refuses to Comply with CZMA Requirements 158

2. The Proposed Project Is Not Consistent with MCZM Energy Policy 1 159

3. The proposed project is not consistent with MOSA 160

4. The DEIS does not address MCZM's concerns 162

5. The impacts of the proposed project will also violate certain enforceable policies of the Massachusetts CZM program 163

B. The Proposed Project Should Be Denied Under Massachusetts Law 164

1. The Proposed Project Is Prohibited by MOSA, Which All Massachusetts State Agencies Are Charged with Enforcing 164

2. The Proposed Project Must Be Denied Under Executive Order 13158 on Marine Protected Area Conservation 167

3. The Proposed Project Will Significantly Alter the Appearance of the Ocean and the Seabed in the CIOS in Violation of Section 14 of MOSA 172

4. The Exceptions in Section 16 from the Prohibitions of Sections 14 and 15 Do Not Include the Generation Plant or the Transmission Lines 174

5. Section 16 Does Not Except from the Prohibitions of MOSA a Transmission Line Dead-ending into an Electric Generating Station in the Ocean Sanctuaries 179

6. The Commonwealth Has the Authority to Deny the State Permits Needed 181

a. The Supreme Court's Decision in *United States v. Maine* Only Settled Title to Nantucket Sound 181

b. Congress Has Granted the Commonwealth the Authority to Deny under MOSA the Petition to Build the Transmission Lines 182

7. The Proposed Project Also Violates the Requirements of Chapter 91 of the Massachusetts General Laws 183

8. The Proposed Dredging Violates State Water Quality Standards 185

a. Jet-Plowing is a Jurisdictional Activity Under Massachusetts Law Requiring Water Quality Certification from the Massachusetts Department of Environmental Protection 185

b. Cape Wind's Application for Water Quality Certification is Grossly Inadequate 185

(i) The Application Contains an Inadequate Discussion of Alternatives 186

(ii) The Application Improperly Relies on Mitigation and Minimization Instead of Avoidance 186

(iii) The Application's Discussion of Proposed Project Impacts is Inadequate 187

(iv) Additional Comments on the Application 188

C. MMS Has Failed to Account for the Cape Cod Commission's Procedures 189

1. Development of Regional Impact Review and the Regional Policy Plan 189

2. MEPA Joint Review 190

3. Cape Cod Commission Authority vs. EFSB 191

4. Lack of Title to Transmission Line Right of Way 191

VII. THE INADEQUACY OF THE DEIS REVIEW ON SPECIFIC ISSUES 192

A. The DEIS Does Not Adequately Address Project Economics 192

B. The DEIS Does Not Adequately Address Technical Risks 195

C. The DEIS Does Not Adequately Address Financial Terms and Generation Costs 195

D. The DEIS Does Not Adequately Address Impacts on Aviation 196

E. The DEIS Does Not Adequately Address Impacts on Water Quality 199

F. The DEIS Does Not Adequately Address Impacts on Fisheries 200

G. The DEIS Does Not Adequately Address Avian and Bat Impacts 206

H. The DEIS Does Not Adequately Address Impacts on Protected Marine Species 211

I. The DEIS Does Not Adequately Address Impacts on the Benthic Environment 214

J. The DEIS Does Not Adequately Address Noise Impacts 218

K. The DEIS Does Not Adequately Address on Aesthetics and Recreation 220

L. The DEIS Does Not Adequately Address Historic and Archaeological Impacts 221

1. Impacts on Above-Ground Historic Resources 221

2. Impacts on Submerged Historic and Prehistoric Resources 222

VIII. CONCLUSION 224

EXHIBITS ..... Volumes II through V

APPENDICES ..... Volumes VI through VIII

be dropped from the purpose statement and that it be replaced with language descriptive of a commercially viable renewable energy facility."[207]

APNS is unaware of any discussion between the interagency team on this topic since MMS has taken over review of the project. What is clear is that MMS has ignored prior debate on this issue, has ignored FERC and NERC guidance regarding "commercial scale" operations, and has adopted an approach that unreasonably applies a standard appropriate perhaps for fossil fuel plants to renewables. Thus, MMS has improperly limited the DEIS scope to projects that are 200 MW or larger in size.[208] This approach does not comport with NEPA.

3. Recommended Purpose and Need Statement

In this case, to comply with NEPA, the purpose and need statement should read:

> The underlying purpose and need to which MMS is responding is to provide an alternative energy facility using a technology that is technically feasible and economically viable that can interconnect with NEPOOL and make a substantial contribution (20 MW or more) to the region's energy reliability and achieving the renewable energy requirements under the Massachusetts and Regional RPS.

This purpose and need statement omits a description of the proposed project itself, which is inherently limiting. It does not confine alternatives to offshore wind energy alternatives, because building an offshore wind energy facility is not the general goal of the action. The general goal is to develop a renewable energy facility that can deliver renewable power to New England, but does not have to be located in, or adjacent to, New England. The proposed revision would enable MMS to develop an EIS that comports with NEPA.

D. There Are Numerous Reasonable Alternatives that MMS Failed to Consider

Once an action agency defines an appropriate purpose and need statement, the next step is to define the range of reasonable alternatives. Many of the problems with this DEIS flow from the improperly defined purpose and need statement.

NEPA requires federal agencies to take a "hard look" at the impacts of their actions. "The sweep of NEPA is extraordinarily broad, compelling consideration of any and all types

---

[207] Ex. 54.

[208] NEPA also requires the consideration of "partial alternatives." Thus, even if 200 MW is the goal, it does not follow that such a project needs to be sited in one location. Smaller-scale projects can be used to meet this goal on a cumulative basis.

of environmental impact of federal action."[209] Special care and detailed analysis are particularly important where a new technology is involved: "NEPA thus stands as landmark legislation, requiring federal agencies to consider the environmental effects of major federal actions, empowering the public to scrutinize this consideration, and revealing a special concern about the environmental effects of a new technology."[210] Extra care is needed to "ensure that the bold words and vigorous spirit of NEPA are not similarly lost or misdirected in the brisk frontiers of science."[211]

At the "heart" of NEPA is the analysis of alternatives.[212] NEPA regulations require federal agencies to "[r]igorously explore and objectively evaluate all reasonable alternatives."[213] It is imperative that the consideration of alternatives "sharply defin[e] the issues and provide[e] a clear basis of choice among options by decision makers and the public."[214] Reasonable alternatives are "those that are *practical or feasible* from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant."[215] An EIS "shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment."[216] As discussed below, the Corps has violated all of these principles in selecting the unduly narrow range of alternatives considered in this DEIS.

The NEPA review of this proposed action does not become meaningful until a proper purpose and need statement is developed. Once this is done, the review of the proposed action assumes its proper perspective, and a full range of NEPA alternatives that advance the clean energy goals of the project on a properly-defined regional basis becomes possible.

As discussed in the previous section, the proper purpose and need for this project is as follows:

---

[209] *Calvert Cliffs' Coordinating Comm., Inc. v. AEC*, 449 F.2d 1109, 1122 (D.C. Cir. 1971).

[210] *Found. on Econ. Trends v. Heckler*, 756 F.2d 143, 147 (D.C. Cir. 1985).

[211] *Id.* at 145.

[212] *Andrus v. Sierra Club*, 442 U.S. 347, 358 (1979).

[213] 40 C.F.R. §1502.14 (a).

[214] *Id.* § 1502.14.

[215] CEQ 40 Questions, 46 Fed. Reg. 18,026 (emphasis added).

[216] 40 C.F.R. § 1502.14.

> The underlying purpose and need to which MMS is responding is to provide an alternative energy facility using a technology that is technically feasible and economically viable that can interconnect with NEPOOL and make a substantial contribution (20 MW or more) to the region's energy reliability and achieving the renewable energy requirements under the Massachusetts and Regional RPS.

When this purpose and need statement is applied, a reasonable set of alternatives is identified. These alternatives are presented under the following categories: 1) offshore wind; 2) other offshore renewable; and 3) onshore renewable. Within the offshore wind category, specific consideration is given to the proposed project for Buzzard's Bay, the Blue H deepwater project, and the sites off the coast of Rhode Island now under formal consideration by the State of Rhode Island. These alternatives are discussed in the following section. In setting forth these alternatives, it is not the responsibility of APNS to provide a detailed analysis; that is the job of MMS. Instead, APNS need only demonstrate that these alternatives are reasonable.[217] APNS meets this obligation in the following discussion, and the burden shifts to MMS to consider these alternatives or explain why the agency has determined that each recommended option is not reasonable.

1. There Are Numerous Offshore Wind Energy Alternative Sites in New England and the Mid-Atlantic

a. The Helimax Report Identifies Numerous Locations for Viable Wind Energy Projects in New England

As detailed in the report by Helimax Energy Inc. (Appendix 21), there are a number of more suitable sites from Maine to Delaware. This assessment is based on technical feasibility studies and the existence of environmental and other factors that affect site suitability. In fact, Helimax took a very conservative approach by limiting its assessment to sites in waters of 20 meters or less, which, as discussed above, is not the current state of technology. Indeed, Helimax relied on more conservative standards than did MMS and still determined that there were numerous alternatives available.

Helimax began with identifying 112 sites, based on wind resource and bathymetry. However, after screening those sites for physical constraints, environmental constraints (reserves, sanctuaries, swimming, etc.), and a minimum capacity of 50 MW, Helimax narrowed the list to 32 sites. After performing a technical assessment and ranking of 32 potential offshore sites, Helimax determined that the majority of preferable sites are located

---

[217] *See, e.g., City of Angoon v. Hodel*, 803 F.2d 1016, 1022 (9th Cir. 1986); *Olmsted Citizens for a Better Community v. United States*, 793 F.2d 201, 209 (8th Cir. 1986); *River Rd. Alliance, Inc. v. Corps of Eng'rs of the U.S. Army*, 764 F.2d 445, 452-53 (7th Cir. 1985).

in New Jersey (16) and Massachusetts (8). Other sites also identified as viable were located in New York (6) and Delaware (2).

As noted above, more than half of the sites are located in New Jersey. Because of the state's long shoreline, relatively shallow bathymetry, and excellent wind resources, Helimax determined that the area was technically attractive for wind energy development. Likewise, Helimax found that the Nantucket and Martha's Vineyard region provided attractive development areas. In addition, Helimax identified 6 sites along the southern coastline of Long Island. Helimax ruled out Maine and New Hampshire on the basis of bathymetry, but as noted above, Helimax conservatively limited water depths to 20 meters.

After identifying viable sites, Helimax ranked the various options based on technical favorability and environmental favorability. After Helimax reviewed the sites from environmental and public interest perspectives, the proposed project was very poorly rated and considered a low-priorty site.[218] Near Massachusetts, projects located south of Nantucket, southeast of Nantucket, northeast of Nantucket and east of Monomoy were all environmentally preferable.[219] Similarly, most of the sites located off the coast of New Jersey and Long Island were considered environmentally preferable.[220] Indeed, the proposed project ranked quite poorly from an environmental perspective.

Regardless of its rankings, what is critical is that, even looking conservatively at waters less than 20 meters deep, there are numerous alternatives that MMS must consider as part of its DEIS. It has failed to do so. Consequently, its DEIS does not comport with NEPA requirements,

b. Buzzard's Bay Proposal

Patriot Renewables, LLC, the renewable energy affiliate of Jay Cashman, Inc. (JCI), is studying the feasibility of and planning to develop an offshore wind facility, called South Coast Wind, in Buzzards Bay. While APNS is strongly opposed to the proposed Blue H project, it is without question a reasonable alternative for NEPA purposes and must be considered as such in this DEIS.

JCI is a comprehensive construction company based in Massachusetts with experience within the marine, heavy civil, dredging, and environmental construction industries. JCI has vast experience in both civil and marine construction and is known for

---

[218] *See* Appendix 21, at 29. As poorly as the proposed project is rated when environmental factors are taken into account, it would be even more negatively classified if the study took into account the negative impact on fisheries now documented in the record of this DEIS.

[219] *Id.*

[220] *Id.*

working in rugged and geo-technically demanding environments. The company played a key role in many of the state's most prominent large-scale in-water and water's-edge construction projects including Boston's Deer Island Treatment Facility and the Central Artery Tunnel. Locally, JCI has worked on the Taunton Nemasket Bridge, the Wareham Bridge, the Brightman Street Bridge, and the Duxbury Beach Jetties. JCI clearly has more experience in the marine environment than does CWA.

The wind energy project would produce 300 MW of power using the "unique" offshore wind resources of New England. The project comprises 90-120 turbines, each producing 2.3-3.6 MW, spaced approximately ¼- to ½-mile apart. The turbines would be located approximately 1-3 miles from shore. The average wind speed in Buzzards Bay is approximately 18-20 mph – some of the best wind available in Massachusetts. Buzzards Bay is reasonably shallow and is sheltered from northeasterly storms. And as with the proposed project, the Buzzards Bay project is located near existing lines and transmission stations.

c. The Blue H Proposal

Blue H Technologies BV of the Netherlands holds patents for floating unit, two-blade wind turbines. The Blue H Technology U.S. subsidiary, Blue H USA LLC, has submitted a Nomination for Lease with MMS to install what it anticipates to be the first floating deepwater wind energy unit in the United States.[221] The Nomination for Lease is the initial phase of a 420 MW commercial wind energy project located 23 miles from Martha's Vineyard and 45 miles from New Bedford in a water depth of 51 meters (167 ft).

Blue H USA's proposed venture will involve exclusively United States facilities in the full cycle of construction, commissioning, and decommissioning of an actual wind energy unit and is the product of a 10-year development effort by Blue H Technologies BV. As mandated by MMS, the demonstration phase of this project will be non-operational.

In December 2007, Blue H Technologies BV launched the first-ever large-scale prototype Submerged Deepwater Platform (SDP) off the coast of Southern Italy. This event marked a world premiere in the offshore wind energy sector. Funding for this demonstration came from world-class investors such as Lehman Brothers and Royal Bank of Scotland. Blue H was featured in a *Forbes* article on deepwater dated February 25, 2008, which confirmed the availability of deepwater technology.

---

[221] MMS denied Blue H's Nomination for Lease on April 17, 2008, apparently because Blue H filed its application too late. Ex. 55. MMS's denial, however, is not sufficient reason to dismiss Blue H as a reasonable alternative under NEPA. *See* NEPA 40 Questions, #2b. CEQ regulations state that even a potential conflict with local or federal law does render an alternative unreasonable. If that is the case, simply having an alternative fail to meet an MMS deadline for initial consideration should have no impact on whether the alternative qualifies for consideration under NEPA.

The offshore wind energy market is projected to represent 50% of the installed capacity of the total wind energy market by 2030. In fact, offshore wind farms benefit from stronger and less turbulent winds, and can avoid logistical constraints due to problems of transportation of the turbines and their blades, as well as address to a large degree the concerns of visual impact of onshore wind farms.

However, with the commercially-available technology today, which requires wind turbine foundations to be installed into the seabed on monopiles or jackets or tripods, the cost of installation grows dramatically as the depth of water increases, limiting potential offshore sites to areas less than 50 meters in depth, greatly restricting the potentially available areas where wind farms can be constructed.

In contrast, Blue H has developed a new solution by adapting the concept of submerged tension-legged platforms developed by the oil industry for some of its offshore rigs, and designed a platform large and stable enough to support a tower and a wind turbine.

As explained by Martin Jakubowski, inventor of SDP technology and author of other Blue H patent applications, this innovative technology:

- **reduces significantly the overall weight** of the structure, a huge element in the cost component of offshore wind units (as an example, REpower's 5 MW units weigh approximately 2,100 tons each; Blue H expects its future deep sea wind energy units, at comparable installed capacity, to weigh less than 800 tons (1,500 tons - including the steel in the counterweight).

- **can be assembled onshore** and then towed out far offshore, at distances of 10 nautical miles or more and positioned in deep waters (50 meters or more in depth). Blue H does not use the heavy equipment needed to build structures into the sea bed; such heavy equipment is both expensive and in short supply – particularly crane ships and jack-up barges.

- **allows siting far enough from the coast** to benefit from stronger and more regular winds (thus reducing the cost per kWh), to overcome frequent environmentalist objections to onshore farms, and to address a fundamental problem of the wind energy industry today, that of being able to deploy larger and larger turbines (also reducing the cost per kWh); it can also often be placed in locations near heavy demand centers.

- **is more environmentally friendly** because it is easier to dismantle with no remnant infrastructure in the seabed.

For all these reasons, Blue H provides a cost-effective solution for the installation of offshore wind energy converters in deep waters. Blue H Skysaver Srl is now constructing Blue H's first commercial unit for an offshore wind farm off the coast of Puglia in Southern Italy. In January 2007, Blue H Skysaver obtained the final authorizations to install its large-scale prototype in the water and has now applied for the required authorizations to build a 90 MW Wind Energy Park in the same area, 20 kilometers from the coast in waters 100-120 meters in depth. The project has the strong support of the Regional Government of Puglia and the local population.[222]

d. The Rhode Island Proposal

The State of Rhode Island is currently seeking bids from private developers to construct, finance, and operate a proposed offshore wind farm that would generate at least 15 percent of the electricity consumed throughout Rhode Island, which is approximately 1.3 million MW annually.[223] The proposed wind farm would be comparable in size to the proposed project and would cost an estimated $1.25 billion.[224] The purpose of the State's offshore wind energy facility is to provide rate relief to the 1,000 residents of Block Island, who are currently paying about 40 cents per kWh, which is more than four times the rate paid by mainland Rhode Island residents.[225] Consequently, the Governor of Rhode Island has noted that the "preferred site" for the wind project would be off the south and western shores of Block Island. The proposed Block Island site was chosen by evaluating 11 possible sites, of which ten were offshore.[226] After a supplemental evaluation conducted by the consulting firm Applied Technology & Management, two locations off of Block Island were selected as producing the cheapest electricity: 1) a 13-square-mile site southwest of Block Island in federal waters; and 2) a 13.1-square-mile site south of Block Island in Rhode Island

---

[222] The availability of this technology always means that many sites are available as well. For example, MMS previously ruled out the East of Nauset Beach site on the grounds that the water was too deep. The Blue H technology demonstrates that such a site is feasible. Ex. 56.

[223] Timothy C. Barmann, *Wind Farm Gathers Steam*, Apr. 4, 2008, http://www.projo.com/business/content/bz_ri_wind_farm04_04-04-08_K19KRPD_v10.2a5e5a4.html, Ex. 57; Carcieri: *State Seeking Private Bids on Onshore Wind Farm Construction*, http://www.ri.gov/GOVERNOR/view.php?id=6172. Ex. 58.

[224] *Id.*

[225] *Id.*

[226] *Id. See also* Final Report RIWINDS Phase I: Wind Energy Siting Study 9April 2007) Ex. 59.

waters.[227] The State's proposed project is deemed to be economically viable, because according to the site selection study, the estimated cost to generate electricity from these two sites averaged over 20 years would be approximately $96/MWh, according to today's dollars.[228]

Recently, developers in Maine also expressed an interest in pursuing offshore wind energy development. Ex. 60. The interest in Rhode Island and Maine demonstrates that MMS has been far too restrictive in the sites it has identified. These other sites also confirm the need for the kind of regional site selection process APNS and others have long advocated, but that MMS has failed to undertake. Widespread regional offshore wind energy development has caught up with the proposed project, and MMS has no choice but comprehensively revise its NEPA approach to the proposed project.

e. Southern Coast of Long Island

As noted in the Helimax report, New Jersey and New York are attractive locations for wind energy development. In addition to the sites identified in that report, there are strong development proposals that must be considered. Included in that list is the project proposed by Winergy Power. Winergy Power submitted a new proposal to a state power agency to place a 940-megawatt wind project in the South Shore waters, south of Long Island. Ex. 61. The plan would involve between 190 and 260 turbines, depending on the turbine technology existing in 2012 when the project is proposed to start. The Long Island Power Authority has expressed interest in the proposed project, after rejecting the initial 300-megawatt proposal as economically unfeasible. Under the latest proposal, the turbines would be 12 to 15 miles off the coast. The 940-megawatt proposal is one of three that Winergy has proposed for the region. It has submitted plans for a separate 600-megawatt farm adjacent to the Long Island proposal that would include some 167 turbines and connect to a ConEd substation in Manhattan. Winergy has also begun a year-long radar-based study of birds and bats as part of a plan to install three test turbines in the waters off Plum Island. Based on these activities, it is clear that there are viable alternatives that MMS should have considered, but has failed to do so in the DEIS.

2. There are Offshore Hydrokinetic Projects

The DEIS fails to consider properly other offshore power generation technologies, such as wave and tidal generation projects that are currently undergoing permitting and study throughout the New England region. FERC has issued preliminary permits to over a dozen hydrokinetic projects in the New England area that have survived its "strict scrutiny"

---

[227] *Id.*

[228] *Id.*

assessment of commercial viability. MMS, however, failed to consider any of these alternative projects in its assessment of the proposed project.

"Hydrokinetic" generation is defined by FERC as a project that "generates electricity from waves or directly from the flow of water in ocean currents, tides, or inland waterways." There are currently over 20 hydrokinetic generating projects in the New England area that are undergoing study and preliminary testing. According to permits filed at FERC, projects in the New England area alone could result in between 300 MW and 1,090 MW of new renewable energy production resulting from offshore generation of power.

The hydrokinetic projects under development in the New England area have many similarities to the proposed project. Like the proposed project, most hydrokinetic technologies involve multiple small generating units of up to 2 MW deployed over a limited geographic area. As with a wind energy facility, the power generated by the individual hydrokinetic projects at a particular "wave farm" is collected on site and transmitted to an onshore substation. Individual projects currently under consideration by FERC include several that may result in wave farms of 200 to 300 MW of installed capacity. The generation from these projects would also qualify for participation in the Massachusetts RPS.

Hydrokinetic technologies represent a viable alternative to offshore renewable energy generation that cannot legally be ignored by MMS. In December 2007, FERC issued its first project license to a buoy generation system located in Malikah Bay, off the coast of Oregon. An analysis conducted by Virginia Tech concluded that there are dozens of hydrokinetic technologies currently undergoing field testing, including several mature technologies that are undergoing long-term *in situ* testing around the world.

Further, like wind energy facilties selecting between turbine manufacturers, once suitable environmental and wave energy studies are completed, offshore power developers will be able to choose from a variety of technologies, based on the characteristics of each site. Hydrokinetic technologies are in the active development stage, as are the 3.6 MW offshore GE turbines that CWA intends to use, which as noted above, are not going to be commercially available.

The hydrokinetic generation technologies currently under development include: underwater turbines (similar to an underwater wind turbine); hydraulic buoys that rely on the rise and fall of the tides to generate energy; floating buoys that generate energy based on the angle at which waves hit the shore; and many others. Several of these technologies are currently undergoing full-scale field testing in Europe, Australia, Korea, and other locations.

The sites currently under review that must be considered as alternatives under NEPA are set forth in the following table.

Project	Location	State	Name of Project	Company	Proposed Size (MW)
P-12794	Buzzards Bay and Cape Cod Bay	MA	Cape Cod Tidal Energy Project	Natural Currents Energy Services, LLC	1 – 10
P-13015	Nantucket Sound and Muskeget Channel	MA	Nantucket Tidal Energy Plant	Town of Edgartown	10
P-12810	Housatonic River	CT	Housatonic Tidal Energy Project	Natural Currents Energy Services, LLC	250 kW – 3 MW
P-12777	Bagaduce Narrows and Castine Harbor	ME	Tidal Energy Device Evaluation Center	Maine Maritime Academy	12
P-12711	Cobscook Bay	ME	Cobscook Bay	ORPC Maine	15 – 22
P-12680	Western Passage	ME	Cobscook Bay	Western Passage	12 - 19
P-12670	Vineyard Sound	MA	Cape and Sound	Oceana	25 – 300
P-12668	Penobscot River	ME	Penobscot Tidal Energy Project	Maine Tidal Energy Co. (Oceana)	50 – 200
P-12722	Piscataqua	NH	Piscataqua Tidal Energy Project	UEK Corporation	40
P-12664	Portsmouth and Piscataqua River	NH	Portsmouth Area Tidal Energy Project	New Hampshire Tidal Energy Co. (Oceana)	25 – 200
P-12704	Half Moon Cove	ME	Half-Moon Cove Tidal Power Project	Tidewalker Associates	13.5
DI05-3	Narangansett Bay	RI	Rhode Island Ocean Wave Energy Project	Greenwave	0.5 – 1
P-13144	Grand Manan Channel / Atlantic Ocean	ME	Grand Manan Channel Project	Manaook Associates	32 – 73
P-13140	Lubec Channel / Atlantic Ocean	ME	Quaddy Roads Project	Tidewalker Associates	38

P-13092	Mouth of the Sakonnet River	RI	Sakonnet River Bridge Project	Rhode Island Energy Group, LLC	0.5
P-13079	Sheepscot River / Westport	MA	Wiscasset Tidal Energy Plant	Natural Currents Energy Services, LLC	5 – 10
P-13045	Buzzards Bay / Acushent River	MA	New Bedford Tidal Energy Project	Natural Currents Energy Services, LLC	1 – 10
P-13046	St. Lawrence River / Tidal	NY	Alexandria Bay Hydroelectric Plant	Natural Currents Energy Services, LLC	1 – 10
P-12961	St. Lawrence River	NY/ONT	Ogdensburg Kinetic Energy	AER NY-Kinetics, LLC	10
P-12876	Lubec Narrows	ME	Maine 1 Project	Hydro Green Energy, LLC	5 – 37
P-12710	Cobscook Bay	ME	Western Passage and Cobscook Bay Tidal Hydrokinetic Project	Passamaquoddy Tribe / UEK Corporation	5
P-12674	Little Machias Bay	ME	Cutler	Tidewalker Associates	13.5
P-12666	Kennebec River	ME	Kennebec Tidal Energy Project	Maine Tidal Energy Company (Oceana)	25 - 100

3. New England Has Hundreds of Onshore Renewable and Clean Energy Projects of 20 MW or Larger that Are Reasonable Alternatives to the Proposed Project

Section 3.2.1.2 of the DEIS fails to consider onshore renewable projects as an alternative to the proposed project, even though hundreds of megawatts of onshore renewable generation are operating in the region and over 2,100 MW of new renewable generation is projected to come online and serve New England within the next few years. As shown below, renewable energy resources that currently qualify under the Massachusetts RPS include: onshore wind energy, biomass, landfill methane gas, anaerobic digestion, photovoltaic generation and others. Additionally, as a result of the February, 2008 ISONE Forward Capacity Market auction, New England will receive over 1,000 MW of new supply from demand response resources. The rapid growth of demand response resources illustrates

they are another viable and cost-effective option for providing low-cost, clean energy to New England consumers.

Further, the DEIS failure to consider any project alternatives located outside of Nantucket Sound is patently unreasonable. There is no rational basis for imposing this geographic constraint, particularly when the balance of the DEIS analysis considers the energy needs of Massachusetts and New England as a whole. At a minimum, the DEIS should consider any renewable resources capable of serving New England. This is the eligibility standard used in the Massachusetts RPS, as well as all other RPS programs in New England. As long as a renewable energy facility or demand side resource can deliver its electricity output to the ISONE grid, the power can be delivered to consumers located anywhere in New England.

There are hundreds of new, renewable energy projects either in the development, permitting, or construction phase in New England that are 20 MW or larger, and which should be considered as alternatives to the proposed project. Even from the wind sector alone the alternative supplies are impressive. As shown in Exhibit 7, the ISONE interconnection queue for renewable energy facilities includes over 2,100 MW of new renewable capacity seeking interconnection in New England. More than half of these megawatts are for new wind facilities (not including the proposed project).[229]

In addition to these proposed new renewable projects, there is substantial room for future growth. First, according to a Massachusetts Department of Energy Regulation analysis, the land-based wind industry has the capacity to produce 9,500 MW of wind generated power in New England.[230] Second, as illustrated by the following chart, proposed onshore wind projects in New England have the capability to supply a significant share of the region's total energy needs. Even a non-exhaustive list of pending onshore wind projects in New England, which are 20 MW or larger, have the potential to supply over 1,795 MW of new generation.[231] Even this estimate, however, is not representative of the total output from *all* proposed wind facilities in New England since it excludes all projects smaller than 20 MW.

---

[229] *See* Exs. 6 and 7. This data is extrapolated from the ISONE Interconnection Queue. ISO New England, ISONE Interconnection Request Queue 03-15-08 (Mar. 15, 2008), *available* at http://www.isone.org/genrtion_resrcs/nwgen_inter/status/interconnection_request_queue_%2003152008.xls.

[230] Catherine Williams, *DOER Chief: Land Based Wind Good Opportunity, Not Widespread*, State House News Service, Apr. 2, 2008.

[231] This estimate is not representative of the total output possible from all proposed wind farms in New England, merely those 20MWs or larger.

Non-Exhaustive List of Proposed Onshore Wind Projects in New England

Wind Farm	Status	Location	Capacity (MW)	Commercial Start Date
Horizon/Linekin Bay Energy	Development	Aroostook County, ME	~500	2007-2010
Marble River Wind Farm	Permitting	Linton and Ellenburg, NY	218	
Kibby Wind Project by TransCanada	Permitting	Kibby Mountain, ME	132	late 2008 or early 2009
Bliss Windpark proposed by Noble Environmental Power	Construction	Wyoming County, NY	100.5	
Clinton Windpark proposed by Noble Environmental Power	Construction	Clinton County, NY	100.5	
Granite Reliable Power Windpark proposed by Noble Environmental Power	Development	Coos County, NH	99	
Ellenburg Windpark proposed by Noble Environmental Power	Construction	Clinton County, NY	81	
Allegheny Ridge Wind Farm proposed by Gamesa/ First Energy Corp.	Construction	Cambria and Blair Counties, PA	80	Phase I in early 2007
Criterion Wind Project proposed by Clipper Wind Power	Development	Garrett County, MD	70	
Stetson Ridge Wind Project proposed by UPC Wind Management	Construction	ME	57	late 2009 or 2010
Maine Mountain Power	Permitting	Redington Township, ME	54	
Passamaquoddy Tribe Wind Farm	Proposed	Prentiss Township, ME	50	
Sheffield Wind Farm by UPC Wind Management, LLC	Permitting	Hardscrabble Mtn., Sheffield, VT	40	~2008
Synergics Wind Energy, Roth Rock Wind power Project	Construction	Garrett County, MD	40	NA
West Hill Wind Power (Sturbridge)	Construction	NY	39	Fall 2008

PMM (Deerfield Wind)	Permitting	Searsburg & Readsboro, VT	30-45	late 2008
Hoosac Wind Project by PPM Energy	Permitting	Florida & Monroe, MA	30	early 2008
CEI New Hampshire Wind, LLC and Community Energy, Inc.	Permitting	Lempster, NH	25-30	late 2008
First Energy Corp / DisGen	Proposed	Somerset County, PA	25	
Lempster Wind Project	Construction	Lempster, NH	24	~2008
Total Proposed MW			~1,795	

Sources:
www.cere.energy.gov/windandhydro/windpoweringamerica/ne_projects.asp
www.awea.org/projects/

In addition to the proposed wind projects, New England is developing other onshore renewable energy projects that should also be considered alternatives to the proposed project. The following chart lists the proposed, non-wind renewable energy projects in New England that are 20 MW or larger. Many of the proposed new projects are either biomass or landfill gas and are capable of providing substantial amounts of generation, as well as firm capacity. The proposed significant non-wind renewable energy projects in New England include:

Non-Exhaustive List of Proposed Onshore Renewable Projects In New England 20 MW Or Greater

Project Type	Location	Capacity (MW)[232]	Projected Commercial Operation Date
Somerset Unit 6 Biomass/Biodiesel	Somerset, MA	120	(conversion)
Biomass Project	Coos County, NH	67.5	6/1/2009
Biomass Project	Berkshire, NH	60	12/1/2010
Biomass Project	Hampden, MA	55	6/30/2009

[232] These estimates are based on winter net MW generation.

Biomass Project	Cheshire, NH	50	6/30/2010
Biomass Project	Hillsboro County, NH	45	2/25/2010
Biomass Project	Coos County, NH	41	5/31/2011
Biomass Project	Litchfield County, CT	40	1/1/2010
Landfill Gas Project	Providence, RI	38.4	12/1/2009
Biomass Project	Windham, CT	38.5	3/31/2010

Sources:
Div. of Energy Resources, Massachusetts Renewable Portfolio Standard Annual RPS Compliance Report for 2006 (2006), http://www.mass.gov/doer/rps/rps-2006annual-rpt.pdf.
ISO New England, ISONE Interconnection Request Queue 03-15-08 (Mar. 15, 2008), *available* at http://www.isone.org/genrtion_resrcs/nwgen_intcr/status/interconnection_request_queue_%2003152008.xls.

4. Demand Response Is a Cost-Efficient, Reasonable Alternative That Should Be Considered as an Alternative to the Proposed Project

In addition to onshore renewable energy projects, demand response resources are a viable and cost effective alternative to the proposed project that should be evaluated. Demand response is the implementation of measures at a customer's business facility that act to reduce the need for electricity and thereby reduce overall demand within the ISO system. These resources can have the most immediate and cost-effective impact on energy needs and costs because they take pressure off of the ISO system during periods of peak demand when energy is most needed and costs are highest. These resources act to reduce the overall need for energy and are an alternative to building additional generation facilities. Demand response has been recognized by FERC and ISONE as providing an important source of low-cost, reliable and environmentally beneficial electricity supply.

Demand response consists of many separate programs, including:

- Reliability-based programs, which include both voluntary and emergency programs that compensate market participants when they curtail their load use during emergency situations or compensate market participants that curtail their energy consumption during particular periods;[233]

[233] Federal Energy Regulatory Commission, 2006 State of the Markets Report 38 (2007), http://www.ferc.gov/market-oversight/st-mkt-ovr/som-rpt-2006.pdf. Ex 62.

- Economic programs that allow participants to submit load reduction bids into day-ahead and real-time markets;[234]

- Time-based rates, such as time-of-use rates and real-time pricing;[235]

- Legacy utility programs, such as interruptible tariffs or direct load control that contributes to system reliability;[236] and

- Calls for voluntary conservation that do not provide a direct economic benefit to the customer.[237]

Demand response plays an important role in meeting energy demand in New England and throughout the United States. According to FERC, demand response played an important role in reducing peak loads during the record demand levels that occurred in New England during the summer of 2006. For example, in Long Island and southwest Connecticut, two of the most electrically vulnerable areas in the country, demand response reduced peak load by approximately 4.6 percent and 6.1 percent, respectively, in the summer of 2006.[238] As shown below, demand response resources eliminated demand growth throughout the afternoon period when demand normally peaks.[239]

---

[234] *Id.* at 39.

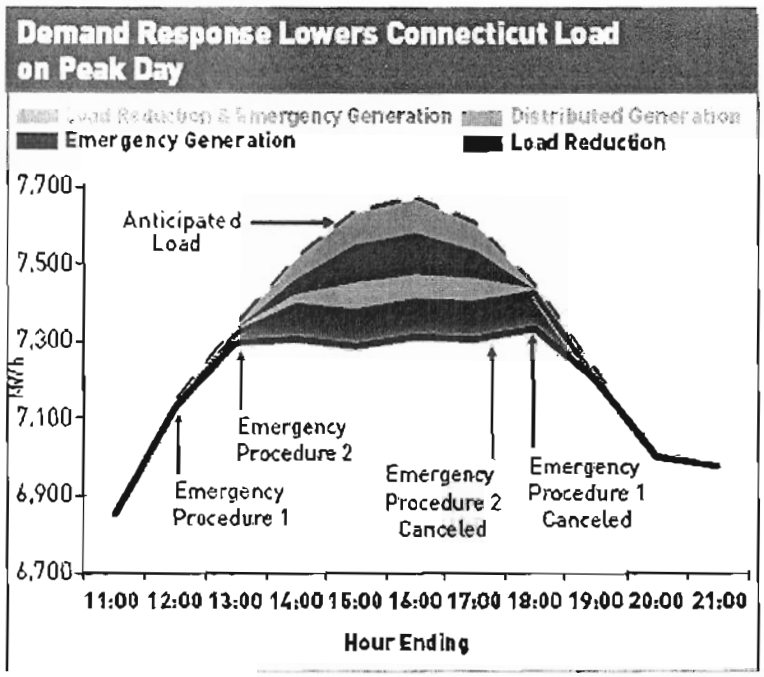
[235] *Id.*

[236] *Id.*

[237] *Id.*

[238] *Id.*

[239] Figure taken from the Federal Energy Regulatory Commission's State of the Markets Report for 2006, *id.at* 38.



Demand response is an effective and economically sound alternative to the proposed project. Not only are demand response resources a cost-effective alternative to project, they have fewer adverse environmental effects.

As shown by the existing and proposed renewable energy generation mix in New England, and the success of demand response technology, there are many cost-effective and environmentally beneficial alternatives to the proposed project that are capable of meeting the current and future energy needs and RPS goals in Massachusetts and New England. Further, there is no rational basis for excluding these alternatives from the MMS analysis. These resources are a cost-effective and environmentally beneficial alternative to the proposed project.

E. Adaptive Management Is Not Appropriate for the Proposed Project and the DEIS Discussion of Adaptive Management Is Inadequate

Another serious problem in the DEIS is the mitigation discussion and the assumption in Chapter 9 that an effective Environmental Management System can be developed and implemented for the proposed project to address post-construction impacts to wildlife through an adaptive management approach. One APNS avian expert, Shawn K. Smallwood, with expertise on the impacts of wind energy projects on birds (Appendix 18), commented, "I have not seen any mitigation plan so briefly and so vaguely described for a wind power project as the one that appears in the DEIS for Cape Wind." Dr. Smallwood goes on to explain that adaptive management is infeasible for the proposed project because the proposal lacks adequate pre-project monitoring and research needed to formulate a reasonably sound

Alliance to Protect Nantucket Soun

Deficiencies in the Analysis of Alternatives in the January 16, 2009 Final EIS on the Cape Wind Project

Submitted to:
S. Elizabeth Birnbaum, Esq.
Director, Minerals Management Service
1849 C Street, NW
Washington, DC 20240

September 24, 2009

SAVE OUR SOUND
alliance to protect nantucket sound

September 24, 2009

S. Elizabeth Birnbaum, Esq.
Director, Minerals Management Service
1849 C Street, NW
Washington, DC 20240

RE: Deficiencies in the Analysis of Alternatives in the January 16, 2009, Final EIS on the Cape Wind Project and Request for Consensus Process

Dear Director Birnbaum:

On behalf of the Alliance to Protect Nantucket Sound (Alliance/APNS) and its 30,000 supporters, we extend our congratulations to you on your appointment to the position of Director at Minerals Management Service (MMS). Established as a nonprofit organization in 2002, the Alliance is a nonprofit environmental organization dedicated to the long-term preservation of Nantucket Sound. Our goal is to protect Nantucket Sound in perpetuity through conservation, environmental action, and opposition to inappropriate industrial or commercial development.

One of our primary objectives has been to promote a comprehensive ocean planning process, particularly for the location of offshore renewable energy resources. We are strongly opposed to the proposed location for the Cape Wind project in the middle of Nantucket Sound due to the many adverse impacts it would have on the public interest values of the Sound. The Alliance is willing to support, however, a decision-making process that locates the project in one of the many alternative sites currently available. The purpose of this letter and the enclosed report is to advance the alternative site relocation process and to bring new information to the attention of MMS. As has been the case for over seven years, the Alliance is ready to work cooperatively with MMS, the project applicant, and other stakeholders to achieve a consensus solution to the Cape Wind controversy. It appears consensus building has been utilized in Rhode Island and Delaware, where offshore wind energy projects are advancing without conflict. The Alliance is hopeful that the Cape Wind controversy can end with a win-win solution as well. Clearly, MMS and DOI leadership will be necessary to achieve this desirable result.

The Alliance has prepared the attached report on the deficiencies in the analysis of alternatives in the review of the proposed Cape Wind Project in Nantucket Sound in the Final Environmental Impact Statement (FEIS), released on the last business day of the Bush Administration. The National Environmental Policy Act (NEPA) clearly requires more than the current level of analysis. Because the purpose and need statement used is too restrictive, a number of reasonable and viable alternatives were impermissibly ruled out and need to be re-evaluated in order to

4 Barnstable Road, Hyannis, Massachusetts 02601
▫ 508-775-9767 ▫ Fax: 508-775-9725

www.saveoursound.org

a 501 (c)(3) tax-exempt organization

address the deficiencies in the Bush Administration FEIS. In addition, new project locations have been proposed with advanced technologies, and new information is available on existing alternatives that require a revised NEPA review. The law is clear that a supplemental NEPA review is required at this time. We respectfully ask the Director to specify that MMS produce a supplemental FEIS.

The Alliance notes that the East Coast states are forming a collaborative to promote the offshore industry by installing a backbone or spine underwater transmission line to reach multiple deepwater sites. The advancement of high-voltage transmission infrastructure that will be installed in federal waters surrounding Massachusetts and adjacent states will enable more alternative sites, as these will be interconnected to the New England Power Pool (NEPOOL). This spine will be a superhighway for offshore site connectivity that meets the criteria set forth by the MMS. To reinforce the point that these sites are valid alternatives, the announcement of the collaborative includes statements by Cape Wind developer, James Gordon, that an industry is advancing with some of the other developers referenced in this paper. This clearly means the alternate site analysis must be expanded to include the sites described in this report.

These new alternatives, combined with President Obama's June 12, 2009, National Ocean Policy Task Force initiative, provide the basis for a new approach to consensus-based decision making that both protects Nantucket Sound—making possible its long-overdue consideration for national marine sanctuary or national monument designation—and removes the controversy that stands in the way of the development of properly-sited offshore wind energy projects in New England. MMS now has the opportunity to show true leadership in ocean management planning and offshore energy development by expanding the consideration of alternatives in the Cape Wind review to achieve a consensus solution, and the Alliance stands ready to assist in that effort.

Thank you for your attention to this matter, and should you have any questions or comments please call me.

Sincerely,

Audra Parker, Executive Director

Enclosure

Cc: Representative William D. Delahunt
Senator John F. Kerry
Rodney E. Cluck, Ph.D., Project Manager, Minerals Management Service
Walter Cruikshank, Ph.D., Minerals Management Service
Andrew Krueger, Ph.D., Minerals Management Service, Alternative Energy Programs
Wyndy J. Rausenberger, Esq., Department of the Interior, Office of the Solicitor

4 Barnstable Road, Hyannis, Massachusetts 02601
▫ 508-775-9767 ▫ Fax: 508-775-9725

www.saveoursound.org

a 501 (c)(3) tax-exempt organization

TABLE OF CONTENTS

Introduction 1

Alternatives within New England 2

Rhode Island 3

Massachusetts Federal Waters 5

Massachusetts State Waters 7

Maine 8

Deepwater Alternatives 9

Offshore Alternatives within an Appropriate Geographic Range 10

Exploratory leases 11

New York 13

New Jersey 13

Delaware 14

Hydrokinetic projects 14

Onshore Alternatives 19

Conclusion 19

Introduction

The Minerals Management Service (MMS) has been tasked with reviewing the proposed Cape Wind Project in Nantucket Sound since 2005. Under the National Environmental Policy Act (NEPA), MMS released a Draft Environmental Impact Statement (DEIS) on January 18, 2008, and a Final Environmental Impact Statement (FEIS) on January 16, 2009, the last business day of the Bush Administration. Both EISs limited the review to the following alternatives: the applicant's preferred site at Horseshoe Shoal (HSS); a no-action alternative; a site south of Tuckernuck Island; Monomoy Shoals; and a series of smaller or phased projects on HSS. All of the alternatives are in the immediate geographic vicinity of the applicant's desired location.

NEPA requires more than the current level of analysis. Action agencies must take a hard look at the impacts of their actions, with the analysis of alternatives at the heart of the review.[1] NEPA regulations require federal agencies to "[r]igorously explore and objectively evaluate all reasonable alternatives,"[2] which are "those that are *practicable or feasible* from the technical and economic standpoint and using common sense, rather than simply [what is] desirable from the standpoint of the applicant."[3]

MMS did not follow this principle in reviewing the Cape Wind Project. A number of reasonable and viable alternatives were impermissibly ruled out because the purpose and need statement used in the DEIS and FEIS is too restrictive. As a result, there are a number of alternatives that must be evaluated to cure the deficiencies in the Bush Administration's FEIS. In addition, new information is now available that requires an expanded alternatives analysis.

Additional alternatives that must be considered include: the Blue H proposal for a floating deepwater commercial wind energy project located off Martha's Vineyard; the State of Rhode Island proposed two phased wind project in state waters; the Winergy Power proposal offshore of Long Island; preliminary permits issued by the Federal Energy Regulatory Commission (FERC) to over a dozen hydrokinetic, or tidal and wave energy, projects in the New England area; onshore renewable and clean energy projects that are reasonable alternatives to the proposed project; and the Commonwealth of Massachusetts' own proposed offshore wind sites in state waters, two sites that can incorporate 166 wind turbines generators (WTGs) with a capacity of 3.6 megawatts (MW). Additional discussion of these sites can be found below.

The law is clear that a supplemental NEPA review is required when significant new information becomes available. NEPA regulations require additional impact analysis whenever there are either substantial changes in the proposed action relevant to associated environmental concerns, or there are significant new circumstances or information relevant to environmental concerns and the proposed action or its impacts.[4] Courts have consistently held that agencies should apply a "rule of reason" when deciding whether supplemental NEPA documents are necessary and

---

[1] *Andrus v. Sierra Club*, 442 U.S. 347, 348 (1979).
[2] 40 C.F.R. § 1502.14(a).
[3] Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026 (Mar. 23, 1981) (emphasis added).
[4] 40 C.F.R. § 1502.9(c).

whether there are circumstances giving rise to the need for new NEPA analysis.[5] With regard to alternatives, "a viable but unexamined alternative renders an environmental impact statement inadequate."[6] As demonstrated by this report, these tests have all been met for purposes of renewable energy projects that are less controversial and harmful options than the Cape Wind Project, and MMS must now expand the EIS with additional alternatives and conduct further public review to comply with NEPA.[7]

Alternatives within New England

The basis for determining reasonable alternatives in an EIS is the purpose and need statement.[8] The 2008 DEIS and 2009 FEIS describe the purpose and need of the proposed project as follows:

> The underlying purpose and need to which MMS is responding is to provide an alternate energy facility that uses the unique wind resources in waters off of New England using a technology that is currently available, technically feasible, and economically viable, that can interconnect and deliver electricity to the New England Power Pool (NEPOOL), and make a substantial contribution to enhancing the region's electrical reliability and achieving the renewable energy requirements under the Massachusetts and regional renewable portfolio standards (RPS).

The Alliance to Protect Nantucket Sound (APNS) has consistently expressed significant concerns over the impact that this narrow statement has had on the alternatives analysis in the NEPA review process. As we have demonstrated in our DEIS and FEIS comments, the purpose and need statement violates NEPA and has the impermissible effect of leaving no options other than the applicant's proposal. (Exhibit 1).

Even under the MMS purpose and need statement's qualifications, significant new developments call for reconsideration of previously rejected alternatives and the consideration of new sites. Proposed projects off the coast of Rhode Island, in Massachusetts State Waters, and off the coast of Maine should be considered as alternatives within New England. Additionally, the development of deepwater floating and jacketed WTG technology means that there are numerous potential deepwater locations that should be considered. In fact, on July 20, 2009, the Boston

---

[5] *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 373-374 (1989); *Portland Audubon Soc'y v. Babbitt*, 998 F.2d 705, 708-709 (9th Cir. 1993).

[6] *Dubois v. U.S. Dep't of Agric.*, 102 F.3d 1273, 1289 (1st Cir. 1996), *cert. denied*, *Loon Mtn. Recreation Corp. v. Dubois*, 521 U.S. 1119 (1997).

[7] By letters of October 2, 2008APNS has already called some of this new information to the attention of MMS. In addition, an expanded alternatives analysis is necessary to comply with the National Historic Preservation Act (NHPA) as discussed in APNS letters of July 29, 2008 and December 30, 2008. A proper NEPA analysis under both NEPA and the NHPA would point the way to project sites that avoid the many negative impacts of the Horseshoe Shoal location and make possible a consensus outcome on the Cape Wind application.

[8] *Roosevelt Campobello Internat'l Park v. EPA*, 684 F.2d 1041, 1047-48 (1st Cir. 1982).

Globe published an article that called into question whether Cape Wind selected an obsolete technology.[9] (Exhibit 2).

Rhode Island

In the DEIS, MMS considered sites off of Rhode Island, such as Block Island, as alternatives to Cape Wind. It has rejected Block Island because of extreme storm waves and areas of rock or bedrock. For the reasons that follow, the rationale purportedly relied on by MMS for refusing to consider the Rhode Island locations is no longer valid. The site rejected by MMS has now been selected by Deepwater Wind for its project using a newer technology than the eight year-old Cape Wind system. The Deepwater Wind project came about through a well-structured offshore wind energy development plan directed by Rhode Island Governor Donald L. Carcieri. In a transparent bidding process, the Deepwater Project was selected against six other projects. Furthermore, the MMS evaluation of the Block Island cost of energy, 13.7 cents per kilowatt hour (kWh), is within ten percent of the 12.8 cents per kWh for the HSS site. The less than one cent difference, given the potential error in estimation, means the Block Island site compares favorably with the proposed site. These reasons dictate the need for MMS to re-evaluate the Block Island site and Deepwater project as a viable alternative. (Exhibit 3).

In spite of MMS' incorrect rejection of the Block Island alternative site due to extreme storm waves, the technology to develop offshore wind projects off Block Island does exist. This is evidenced by the proposed Deepwater Wind Project and the recent Horns Rev 2 Project off the coast of Denmark. The Horns Rev 2 Project, labeled as the world's largest offshore wind farm, is located 30 kilometers off the coast of Denmark and is slated to go into operation on September 17, 2009. The proposed wind farm will be spread over a 35-square kilometer area and has an overall capacity of approximately 209 MWs. (Exhibit 4). The Project will utilize turbines approximately 150 meters high, with 30-40 meters of the turbine below sea level. (Exhibit 5). The fact that the Project will be located almost 19 miles off the coast of Denmark in the extreme sea state and weather conditions of the North Sea is proof that technology does exist to build an offshore wind farm off of Block Island despite the potential for extreme storm waves and weather. As stated on the Project's website, the North Sea is known for its hazardous weather conditions and "waters which earlier in the Danish history have been known to swallow up many good men." (Exhibit 5). The FEIS similarly ruled out other alternative sites located off the coast of: Portland, Maine; Cape Ann, Massachusetts; Boston, Massachusetts; Nauset, Massachusetts; Nantucket Shoals, Massachusetts; and Phelps Bank, Massachusetts due to storm wave height. In light of the development of the Horns Rev 2 Project, MMS should reconsider the alternatives ruled out on account of alleged extreme storm wave height.

Furthermore, as indicated, Rhode Island's solicitation of projects resulted in selection of New Jersey-based Deepwater Wind for two major phases of wind development. Phase One, the Block Island project, will be a 20 MW project in state waters. It is expected that construction of Phase

[9] It is not surprising that technology has eclipsed Cape Wind's plan given the eight year review process. On March 3, 2009, the New York Times revealed that GE is no longer offering the 3.6 MW WTG relied on by the project applicant, thereby illuminating the fact that the monopile system in not cost effective.

One will begin in late 2010 and be completed in late June 2012. As a result of negotiations between the State and Deepwater Wind, the developer has revised the construction schedule to put the development on pace to be the first offshore wind project constructed in North America.

According to the analysis shown in Appendix F of the Cape Wind FEIS, the Block Island site's projected cost to produce electricity is comparable to that of Cape Wind. Deepwater Wind utilizes proven, state-of-the-art jacket foundation technology that allows wind turbines to be cost-effectively deployed in water depths up to 150 feet. Rhode Island has already evaluated the Block Island site as viable, and this site now clearly meets MMS' narrow purpose and need statement. The fact that companies are pursuing this site means that MMS is incorrect that the alleged storm wave height rules out the location for development. In the real world, the Rhode Island sites have proven to meet the NEPA test of being a "practicable and feasible" alternative and must now be reviewed in a Cape Wind EIS.

In Phase Two, Deepwater Wind will construct a utility-scale project in a separate location, capable of producing 1.3 million megawatt hours (MWh) annually – or 15 percent of the State's electric demand – within three years of approval of Deepwater Wind's application to MMS. This 385 MW project will be a 100-turbine deepwater wind plant 15 to 20 miles off the coast. The exact location of the Deepwater Project will be determined by the results of the ongoing Special Area Management Plan (SAMP) permitting process, spearheaded by the Rhode Island Coastal Resources Management Council and the University of Rhode Island's Graduate School of Oceanography. Given its utility-scale size and time frame, this project clearly should be viewed as a viable alternative to Cape Wind. Moreover, the offshore wind resource in the general area considered for this Phase Two project is sufficient to accommodate more than one utility-scale facility. Thus, in addition to the Deepwater Wind project serving as an alternative to Cape Wind itself, MMS also must consider simply moving Cape Wind to this location as well. (Exhibit 6). Walt Musial of the National Renewable Energy Lab has confirmed that the Rhode Island location is viable for 400 MWs of offshore wind power. (Exhibit 7).

Finally, Deepwater is in a better position than is Cape Wind to secure a Power Purchase Agreement (PPA) and, consequently, to obtain the necessary funding to finance its project. As a result, this project is far more "practicable and feasible" than Cape Wind. Since the issuance of the FEIS, Rhode Island signed legislation that requires National Grid, the state's largest electric utility, to buy power from renewable energy producers. Specifically, the legislation requires National Grid to make long-term contracts to buy 90 MWs of renewable power; a step that Rhode Island Governor Carcieri stated should help Deepwater Wind secure the $1.5 billion in funding it expects to need for the two offshore projects. (Exhibit 6).

Cape Wind, by contrast, has very poor prospects of obtaining a PPA. Massachusetts enacted the Green Communities Act that also calls for state retail utilities to solicit PPAs from renewable energy projects. Section 83 of the Green Communities Act calls for the PPAs to cover three percent of the state's total demand of electricity. The Draft Request for Proposal (RFP), issued by Massachusetts Department of Public Utilities (DPU) and Department of Energy Resources (DOER), shows that the four retail utilities might execute PPAs that, on a combined basis, would procure about 1.4 million MWh annually. Cape Wind claims it would produce 1.6 million MWh. This amount of demand (1.4 million MWh per year) falls short of Cape Wind's output, which means even if Cape Wind were able to contract for all the power, it would not be sufficient.

Also, it is unlikely that Cape Wind would receive any portion of the PPAs because it is common knowledge that a project such as Cape Wind would require a selling price of at least 21 cents per kWh, which is at least twice the market price for power.[10] Massachusetts, fortunately, has many renewable energy projects in the pipeline with costs much lower than Cape Wind. Finally, Cape Wind faces strong opposition because of its location. Any effort to award a PPA to Cape Wind will be vigorously opposed. At an alternative site, however, a PPA could be supported.

The availability of a PPA is critical to satisfying MMS's own purpose and need statement, which requires the project to be financially viable. As is clear from MMS' own Appendix F analysis, Cape Wind is not financially viable. The peer review notes that the cost of Cape Wind, including subsidies, is still more than double the regional market. Cape Wind would not be profitable. In fact, Cape Wind is less viable economically today than it was at the time of the FEIS release. The National Academy of Sciences issued a report indicating a project such as Cape Wind would now cost 21 cents per kWh.[11] The local market is less than ten cents per kWh. On this basis alone, MMS should have rejected Cape Wind under its own EIS criteria. In any case, the offshore Rhode Island sites have emerged not only as reasonable alternatives that must be considered, but as clearly preferable alternatives that render Cape Wind and HSS undesirable and a flawed choice for further federal action.

Massachusetts Federal Waters

South of Tuckernuck Island (STI) is a reasonable alternative to Cape Wind and is, in fact, superior to Cape Wind's preferred site on HSS in several areas, including tribal and cultural impacts, historic preservation, visual impacts, navigation, and oil spill risk. The FEIS, however, fails to identify STI as preferable to HSS.

The Mashpee Wampanoag Tribe, which opposes HSS because of impacts to Tribal cultural, ceremonial, and religious practices, has, since the issuance of the FEIS, expressed support for STI as a better alternative with fewer impacts. According to the Mashpee Wampanoag Tribal Historic Preservation Officer (THPO) at the section 106, June 16, 2009, meeting, STI is clearly a superior site. "The area -- I can be sure that the proposed project falls into the area that the Wampanoags use, I can be sure of that. I can be sure of -- that the visual resources that are being affected, like the 28 properties that have been determined to be affected, do not exist on the other side of Tuckernuck, that there are no historic resources that will be affected visually from that section from the Mashpee Wampanoag's point of view, okay?" The THPO further stated, "South of Tuckernuck is not visible from any of the historic district sites, it is closer to the island, but it's closer to the island and the island is ... I think it's 85 percent conservation lands, it is not in view of the historic district." (Exhibit 8).

The STI site also would significantly reduce the visual impact compared to HSS, which is surrounded by three landforms. STI would affect a smaller area and fewer people and would not be visible from the Cape Cod mainland. Considering the fact that 71 percent of the population of

---

[10] The National Academies recently released a report on renewable energy. The report shows that an offshore wind energy project requires a selling price of 20.95 cents per kWh. This is a most credible source of information. It corroborates the FEIS Appendix F findings that Cape Wind is not a profitable project.

[11] *Electricity from Renewable Resources*, National Academies Press, 112, table 4-2 (2009). The figure for offshore wind is $209 per MWh which is 21 cents per kWh.

Martha's Vineyard and almost the same percentage of the population of Nantucket are concentrated on the northern half of the respective islands, STI would be more directly visible for 7,726 people. In comparison, HSS would be more directly visible for more than 111,800 people if one takes into account the communities facing the shores of Nantucket Sound located on Cape Cod, Martha's Vineyard and Nantucket (Helimax Energy, "Independent Review of FEIR," March 2007, included as Appendix 21 in Alliance comments on DEIS).

STI would have fewer navigational impacts than would HSS. STI supports little to no commercial marine vessel traffic, its vicinity does not fall on or adjacent to any marine transportation route, it has no passenger ferry traffic, and the population of recreational boaters and fishing activity in the area is dramatically smaller than similar marine activity in Nantucket Sound. Furthermore, given the greater separation between towers, the lack of proximity to established channels and ferry routes, and significantly reduced marine traffic and activity, this alternative is less objectionable than the primary site on HSS. Greater separation would be potentially less hazardous to mobile gear fishermen.

A major release of oil due to a collision with an oil tanker vessel and a wind turbine generator (WTG) at the proposed HSS site is much more likely than at the STI site, as tanker vessels commonly ply the Main Channel adjacent to HSS and normally do not navigate Muskeget Channel north of the STI site. Therefore, the worst-case discharge at STI (approximately 41,000 gallons of transformer oil and diesel oil plus smaller amounts of oil and hazardous substances from each WTG) would be much smaller than a worst-case discharge from a tanker vessel collision with a WTG at the HSS site (41,000 gallons from ESP, small amounts from WTG plus up to approximately 1.3 million gallons of fuel oil from a tanker vessel). A significantly larger release from a tanker vessel allision at Horseshoe Shoal would likely result in substantially larger ecological impacts than a (relatively smaller, but still significant) release from only the ESP or WTG.

The HSS site is more susceptible to the impacts of sea ice than the STI alternative site location. Accordingly, the STI site is less susceptible to impacts and potential spillage of oil and hazardous substances from sea ice than the HSS location.

All of these factors argue strongly in favor of STI. Despite these significant public interest benefits, the incremental cost of STI over HSS is inconsequential. The FEIS calculates cost of generation at $128/MWh (after subsidies and tax credits) versus $143/MWh for STI (including MMS peer review adjustments). This represents an additional cost of just 12 percent for STI. While water depths, wave heights, and distance from shore may pose additional costs for STI, the wind is stronger, which offsets some of the additional capital costs. In addition, a larger footprint could be considered to further offset additional costs. Moreover, it has been assumed in the FEIS that all connection cables from STI will cross Nantucket Sound and pipe into the New England power grid where the alternative on HSS would make landfall. Cable connections from STI to the islands of Martha's Vineyard or Nantucket have not been considered.

It is clear that no offshore wind energy projects are capable of development without large public subsidies or loans. It, therefore, follows that projects like Cape Wind should not be considered or approved for highly controversial sites such as HSS, when other sites that have broad-based

public support are available. If taxpayers are to foot the bill for projects such as Cape Wind, it should be the desire of the applicant and the duty of the federal decision-maker to select the site that reduces controversy and conflict as the trade-off for large public subsidies. The applicant's narrow economic self-interest should not dictate a public-interest decision where not only will federal land be made available for development, but where many substantial public subsidies will be required to make the project feasible. STI meets this goal by minimizing public interest conflict; the applicant's preferred site at HSS maximizes conflict and controversy.

MMS has full authority to advise the applicant of the need to consider alternative sites. While it is not possible to require this project developer to select a different location, MMS has a duty under NEPA to identify the preferable site. By encouraging Cape Wind to seek an alternative site, such as Rhode Island or STI, rather than investing in the site that produces maximum conflict and significantly harms the public interest, MMS will pave the way for a consensus solution.

Massachusetts State Waters

On June 30, 2009, the Commonwealth of Massachusetts released its draft Ocean Management Plan (OMP). This plan identifies two areas in state waters that could accommodate utility-scale wind projects. As many as 166 wind turbines, generating enough electricity to power some 200,000 homes, could be built to the southwest of Martha's Vineyard: one on the far side of Noman's Land and the other off the Elizabeth Islands. The FEIS did not consider either of these alternatives, which have now become reasonable alternatives as a result of the Commonwealth's post-FEIS plan.

The above map shows the two areas west of Martha's Vineyard highlighted for wind energy.

This option would be 25 percent larger in numbers of turbines and almost 50 percent larger in generating capacity than Cape Wind. According to the state draft plan, the two areas southwest of the Vineyard presented the least conflicts. The plan stated that the area south of Noman's Land is unusual in that there are few other places in state waters that are three or four miles away from population centers and have relatively minor potential conflicts, such as with navigation or ecosystem values.

In addition, the Massachusetts plan also would authorize other areas of state waters that would still be available for small-scale community wind generation, subject to environmental vetting. The MMS EIS did not consider these sites, and they must now be considered as reasonable alternatives as a result of the State's June 30, 2009, draft plan.[12] Thus, the new state plan alternatives must be considered.

Maine

In another post-FEIS development, international energy companies are now looking seriously at Maine for massive wind turbines and support structures that would float in deepwater, out of sight of the coast and in line with the strongest breezes. The Maine Ocean Energy Task Force will identify up to five offshore demonstration sites before year's end.

Seattle-based Principle Power Inc. is seeking investors to finance a prototype of its patented WindFloat floating support structure. It is designed to handle a 400-ton tower and a 5 MW turbine, with a rotor up to 500 feet in diameter. At commercial scale, Principle anticipates a 30-turbine wind project that can generate 150 MWs. (Exhibit 9).

Maine is one of five sites worldwide – along with Portugal, the United Kingdom, Hawaii and Oregon – being considered by Principle. Maine is appealing because of its wind resources, nearness to population centers, and active wind energy research at the University of Maine. The company has already signed agreements with a Portuguese utility for a phased WindFloat development and has begun meetings in Oregon for a demonstration project ten miles offshore.

Maine's test sites may also attract a company like StatoilHydro, a Norwegian oil and gas firm that is expanding into worldwide energy ventures. StatoilHydro is monitoring the work of Maine's task force and plans to begin video conferences this summer with representatives from the University of Maine. Statoil officials have expressed interest in testing the Hywind WTG off the coast of Maine once sites are designated. Hywind is designed to extend more than 300 feet below the ocean, so it will be far enough from land to avoid most conflicts with existing uses. (Exhibit 9).

---

[12] Under NEPA, MMS cannot ignore alternatives simply because they do not fall under its jurisdiction. *See, e.g., NRDC v. Hodel*, 865 F.2d 288, 295-96 (D.C. Cir. 1988); *NRDC v. Morton*, 458 F.2d 827 (D.C. Cir. 1972); 40 C.F.R. § 1502.14(c).

Cape Wind has become a cautionary tale for Maine's task force. Representatives from lobstering, groundfishing, and aquaculture joined conservationists and recreational boaters to suggest how Maine can avoid the pitfalls of Cape Wind. Their overall message: Work closely from the start with coastal communities and interest groups to win support for Maine's test sites. Deepwater wind facilities create fewer human conflicts because the bulk of lobster fishing and boating takes place within three miles of the coast. Floating wind sites are likely to be at least 12 miles offshore. Researchers at the University of Maine are compiling databases that include whale sightings, bird migration, and shipping routes to identify the best sites. Recently, the University of Maine received a $4.6 million stimulus grant to create a deepwater wind research center. This is further confirmation that deepwater wind is the technology of the future, not the monopile WTG, which GE has abandoned and Cape Wind relies on.

Deepwater Alternatives

While MMS recognized the existence of floating foundation WTGs in the FEIS, it failed to consider any such sites as alternatives because it incorrectly assumed that the technology is not reasonably available. The technology for these facilities is more mature than MMS represents, and it is viable now for NEPA purposes.

Both Blue H and Hywind already have launched pilot projects, with Blue H's pilot completed and the site decommissioned. Deepwater floating turbine technology, therefore, is readily within the timeframe that is reasonable to be included as an alternative in the EIS. The recent article in *The Boston Globe* confirms that new technology and less-conflicted projects have already overtaken Cape Wind. (Exhibit 2). MMS must, therefore, revise its NEPA analysis to account for these new sites and technologies. A summary of current deepwater projects is set forth below.

Blue H has a deepwater project in Italy that is "shovel ready," fully permitted and supported by a PPA. From a commercialization standpoint, the Blue H deepwater project is well ahead of the Cape Wind proposal. On January 14, 2009, Blue H of the Netherlands announced delivery of a commercial 2.0 MW floating platform WTG for 2009. The 2.0 MW WTG is currently being manufactured and will be deployed off the coast of Puglia, Italy. (Exhibit 10). This represents the first of a planned 90 MW floating wind project to supply the power needs of 75,000 Italian homes. (Exhibit 10).

Blue H has also announced plans to develop a deepwater water wind energy project 23 miles southwest of Martha's Vineyard and has been ready, for over a year, to evaluate the site pending MMS approval. Blue H has an application before MMS to test its system and has support from the entire Massachusetts Congressional Delegation. (Exhibit 11). MMS only recently granted Blue H permission to secure the permit from the Army Corps of Engineers, and Blue H has submitted its application. Blue H hopes to moor the test platform off the coast by 2010 to collect vital data. The long-term goal is to have 120 turbines floating in 167 feet of water, generating 420 MWs. (Exhibit 11).

Siemens and energy company StatoilHydro have already installed what they call the first large-scale floating turbine. The Hywind, a 2.3 MW deepwater WTG built by Siemens, is sited off the coast of Norway and combines technologies from both the wind industry and the oil and gas

sectors. It will be tested off the coast of Norway over the next two years. The turbine has a 100-meter draft that is anchored to the seabed with cables that can be up to 700 meters long. The WTG has a ballast that is tied to the sea floor with cables. Wires will transfer the electricity produced to the mainland grid. The Hywind technology is suitable for depths of about 400 feet to more than 2,200 feet. The turbine in Norway is 7.4 miles offshore where the water is 721 feet deep. It is a utility-size turbine, with a hub height of about 100 feet, capable of generating 2.3 MWs of electricity. (Exhibit 12).

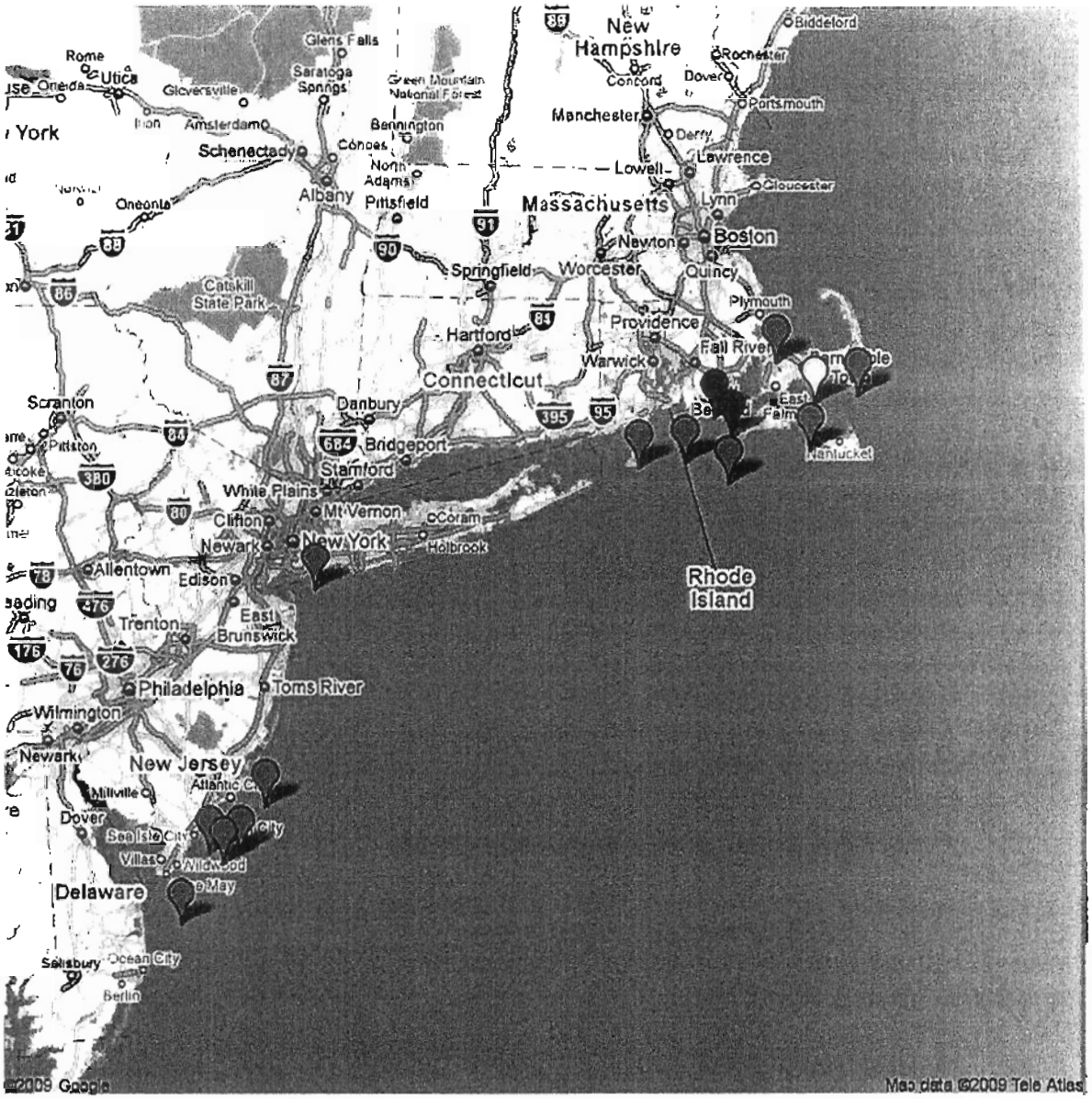
According to the June 4, 2009, MIT Technology Review, "The notion of floating wind turbines far offshore may have come a nautical mile closer to reality late last month, with the announcement of a collaboration between Norwegian oil and gas producer StatoilHydro and Germany's Siemens." (Exhibit 13).

The project planned by StatoilHydro and Siemens involves mature technologies being implemented by industrial giants. StatoilHydro's plan relies on a combination of well-tested components. A 165-meter-tall spar buoy, closely modeled after oil and gas production platforms used in the Gulf of Mexico and elsewhere, supports a standard, mass-produced Siemens 2.3 MW turbine. StatoilHydro plans to lower the price of the floating turbine by running it for two years and gathering the data needed to estimate the smallest anchor and buoy required to support a wind turbine. Some additional cost will be defrayed by more consistent winds that keep the turbines spinning more often and, thus, boosting the MWs of electricity generated by each turbine. These projects are, indeed, more viable than Cape Wind, which is designed to use a technology that is, in practical terms, unavailable (the 3.6 MW monopile WTG). MMS cannot look the other way on Cape Wind and claim that deepwater technologies cannot be considered as alternatives because they are not available.

Offshore Alternatives within an Appropriate Geographic Range

In addition to alternatives within the narrowly (and unlawfully) defined area (waters off of New England) considered by MMS in the purpose and need statement, numerous viable and reasonable alternatives are found within a geographically appropriate range that would still provide renewable electricity to NEPOOL. (Exhibit 1). The viability and reasonableness of these alternatives has been recognized by MMS' recent decision to grant five exploratory leases in the waters of the Mid-Atlantic and the ongoing permitting activities of FERC and MMS for hydrokinetic projects in New England, New York, and New Jersey.

The following map shows a number of the alternatives that MMS needs to fully evaluate.


New Hampshire
Biddeford
Rochester
Concord
Dover
Portsmouth
Manchester
Derry
Lawrence
Lowell
Gloucester
Massachusetts
Lynn
Boston
Newton
Quincy
Worcester
Springfield
Plymouth
Providence
Fall River
Warwick
Hartford
Connecticut
Danbury
Bridgeport
Stamford
White Plains
Mt Vernon
Coram
Holbrook
Clifton
Newark
New York
Allentown
Edison
East Brunswick
Trenton
Philadelphia
Toms River
Wilmington
Newark
New Jersey
Millville
Dover
Sea Isle City
Villas
Wildwood
Delaware
Salisbury
Ocean City
Berlin
Rhode Island
Nantucket
Rome
Utica
Oneida
Gloversville
Amsterdam
Schenectady
Albany
Oneonta
Glens Falls
Saratoga Springs
Green Mountain National Forest
Bennington
Cohoes
North Adams
Pittsfield
Catskill State Park
Scranton
Pittston
Hicoke
Bloomington
Allentown
Reading
Rome
Oneida
Iron
York
Nanticoke
Wilmington
Newark
Millville
Dover
Sea Isle City
Villas
Wildwood
Delaware
Salisbury
Ocean City
Berlin
©2009 Google
Map data ©2009 Tele Atlas

The noted sites include:

Cape Wind Proposed Site (Horseshoe Shoal)

Cape Wind FEIS Alternative Site (Monomy Shoals)

Cape Wind FEIS Alternative Site (South of Tuckernuck Island)

Deepwater Wind (Rhode Island, Phase I)

LIPA/Con Edison

MA State Ocean Plan (Commercial Site I)

MA State Ocean Plan (Commercial Site II)

Massachusetts Military Reservation

Deepwater Wind (Rhode Island, Phase II)*

*Exact location to be determined by the results of a Special Area Management Plan

Blue H USA

Bluewater Wind (Delaware)

Fishermen's Energy of New Jersey

Deepwater Wind (New Jersey, Site II)

Deepwater Wind (New Jersey, Site I)

Bluewater Wind (New Jersey)

Trifium Power Wind 1

Exploratory leases

The Department of the Interior (DOI) issued five exploratory leases for renewable wind energy production on the Outer Continental Shelf (OCS) off the coasts of New Jersey and Delaware on June 23, 2009. These post-FEIS leases were issued to Bluewater Wind New Jersey Energy, LLC;

Fishermen's Energy of New Jersey, LLC; Deepwater Wind, LLC; and Bluewater Wind Delaware, LLC. The leases authorize data-gathering activities, allowing for the construction of meteorological towers on the OCS from six to 18 miles offshore to collect site-specific data on wind speed, intensity, and direction.

The following companies are receiving the exploratory leases for meteorological towers:

State	Distance	Company
New Jersey	15 - 18 miles	Bluewater Wind New Jersey Energy
New Jersey	6 - 9 miles	Fishermen's Energy of New Jersey
New Jersey	15 - 18 miles	Deepwater Wind
New Jersey	12 - 15 miles	Deepwater Wind
Delaware	14 miles	Bluewater Wind Delaware

New York

Within the last several months, government agencies and utilities are gauging the interest of developers in building a massive wind project 13 miles off the coast of New York City. New York's dominant electricity company, Consolidated Edison Inc., and the Long Island and New York power authorities hope to build a 350 MW farm off Rockaway Peninsula in the Atlantic. The project could expand to 700 MWs, which would make it the largest offshore wind project in the United States. (Exhibit 14). Previous efforts by the Long Island Power Authority (LIPA) to build a 140 MW wind farm off the Long Island coast at Jones Beach faltered after cost estimates reached $800 million, double the initial projections. The LIPA project was rejected after an independent consulting report concluded that the project would increase electric bills. Most tellingly, LIPA had selected the GE 3.6 MW WTG for its project. This is most relevant information for MMS as it considers Cape Wind. The new sites off the coast of Long Island, however, are more promising because of the application of new technology. The FEIS failed to consider sites in New York because these were considered too far from the proposed action. That reason is not valid because these sites could connect to the New York Power Pool (NYPOOL) grid that is adjacent to NEPOOL. The Massachusetts RPS allows for renewable energy from adjacent power pools to qualify to satisfy RPS requirements.

New Jersey

On October 3, 2008, New Jersey regulators selected Garden State Offshore Energy (GSOE) to develop the state's first offshore wind farm project. GSOE, a joint venture between a unit of Public Service Enterprise Group and Deepwater Wind, was selected by the state Board of Public Utilities from five firms vying for state support and a grant of up to $19 million. The state program provides aid for up to 350 MWs. The project is slated to include 96 turbines that would be between 16 miles and 20 miles off the coast due east of Avalon. The joint venture will take $4 million of the $19 million grant offered by New Jersey. (Exhibit 15).

Once all permits have been issued, GSOE will commence with the construction of the project, which is estimated to require an investment in excess of $1 billion. It is anticipated that the wind farm will be built over a period of three years, with a target completion date of 2013. GSOE uses a proprietary technological solution – a wind turbine foundation adapted from technology that

has been used successfully over many years in the offshore oil and gas industries. GSOE's jacket foundation allows wind turbines to be installed in deep waters, far from the shore. The FEIS failed to consider the New Jersey sites because the distance is too great from New England. That rationale is no longer valid because the Obama plan for the SmartGrid to bring renewable power to New England must be considered. In addition, this site is not "too far" from New England, being less than 200 miles. Finally, the GSOE jacket technology confirms that deeper water sites in New England should not have been rejected and now must be reconsidered in a new EIS.

Delaware

Bluewater Wind Delaware, LLC, a subsidiary of Babcock & Brown, is well positioned to move forward. Delaware's Delmarva Power, a regulated electric utility that provides electricity to Delaware and the Eastern shore of Maryland, signed a 25-year PPA with Bluewater Wind for up to 200 MW in June 2008. The pact was ratified by the state in July 2008.

Bluewater Wind's offshore wind proposal has a 450 MW nameplate capacity and would be located approximately 11.5 nautical miles off the coast of Rehoboth Beach, Delaware. Delaware's average offshore winds have the potential to produce 5,286 MW, which would power between 1.2 and 1.5 million average homes.

In addition to its contract with Delmarva Power, Bluewater Wind has received legislative approval of changes to the state's RPS to allow for renewable energy credits (RECs) from the offshore wind farm to be credited to Delmarva Power's account at a rate of 350 percent (or 3.5 credits) per REC. One REC equals one MWh of electricity, which equals the average monthly amount of energy used by a Delaware household. (Exhibit 16).

All of these alternatives outside of New England should be considered as alternatives to Cape Wind. Although not in waters offshore of New England (an arbitrary and legally impermissible limitation imposed by MMS), their electricity could readily be made available to NEPOOL (also an arbitrary and legally impermissible limitation imposed by MMS). Contracts for renewable energy west of New England are contemplated. In fact, the proposed LIPA/Con Edison New York site is located less than 100 miles from "New England offshore waters" and cannot be excluded merely on the basis of geography.

Hydrokinetic projects

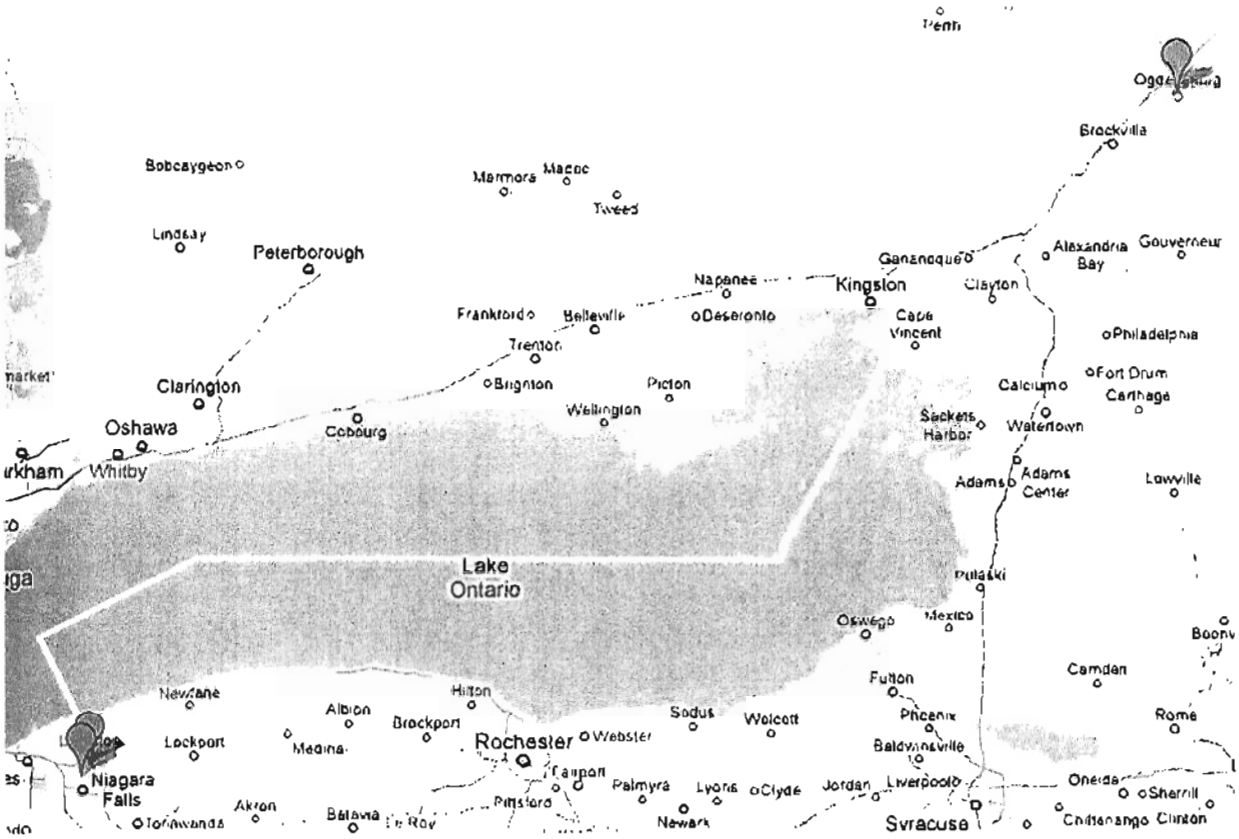
Furthermore, in the DEIS and FEIS, MMS failed to recognize a number of proposed hydrokinetic projects in New England, New York, and New Jersey that could serve as alternative sources of electricity due to MMS' conclusion that hydrokinetic projects did not meet the purpose and need statement of the proposed Cape Wind Project. Additionally, MMS improperly concluded that hydrokinetic projects were not a feasible alternative, claiming that hydrokinetic facilities capable of producing large amounts of electricity are not likely to be commercialized for several decades, and, thus, cannot provide a substantial contribution of renewable energy to the Massachusetts and regional RPS in the near future. MMS further ruled out hydrokinetic projects as an alternative due to the capital costs of constructing these facilities.

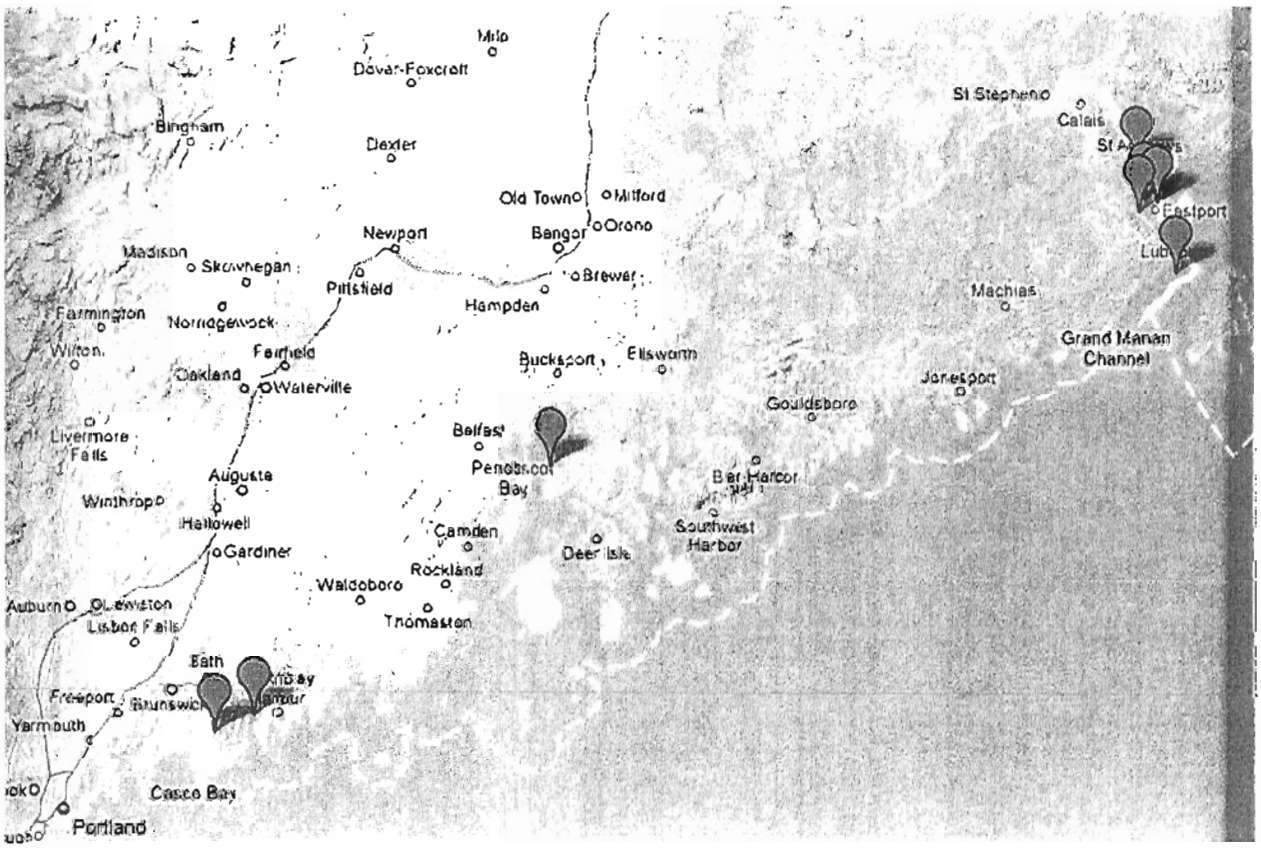
However, since the issuance of the DEIS and FEIS, there have been significant developments in hydrokinetic permitting and technologies. MMS and FERC have issued regulations governing the permitting and licensing of offshore hydrokinetic projects, which has spurred project development in this area. Just this past April, FERC and MMS issued a Memorandum of Understanding (MOU) regarding the permitting and licensing of offshore renewable energy projects. More recently, in August 2009, FERC and MMS also released guidance on this issue to further clarify the permitting and licensing process for hydrokinetic projects. Further, on August 19, 2009, FERC and the State of Maine signed an MOU to coordinate the procedures and schedules for reviews of tidal energy projects off the coast of Maine. The establishment of an MOU between FERC and the State of Maine will help ensure that all hydrokinetic projects licensed off the coast of Maine will be done in an environmentally sensitive manner and take into account economic and cultural concerns. Additionally, FERC and the State of Maine will agree on a schedule to ensure the processing of hydrokinetic project applications as early as possible. The entities will work to identify potential issues that may arise with proposed hydrokinetic projects to expedite their review and determine any additional studies that are needed.

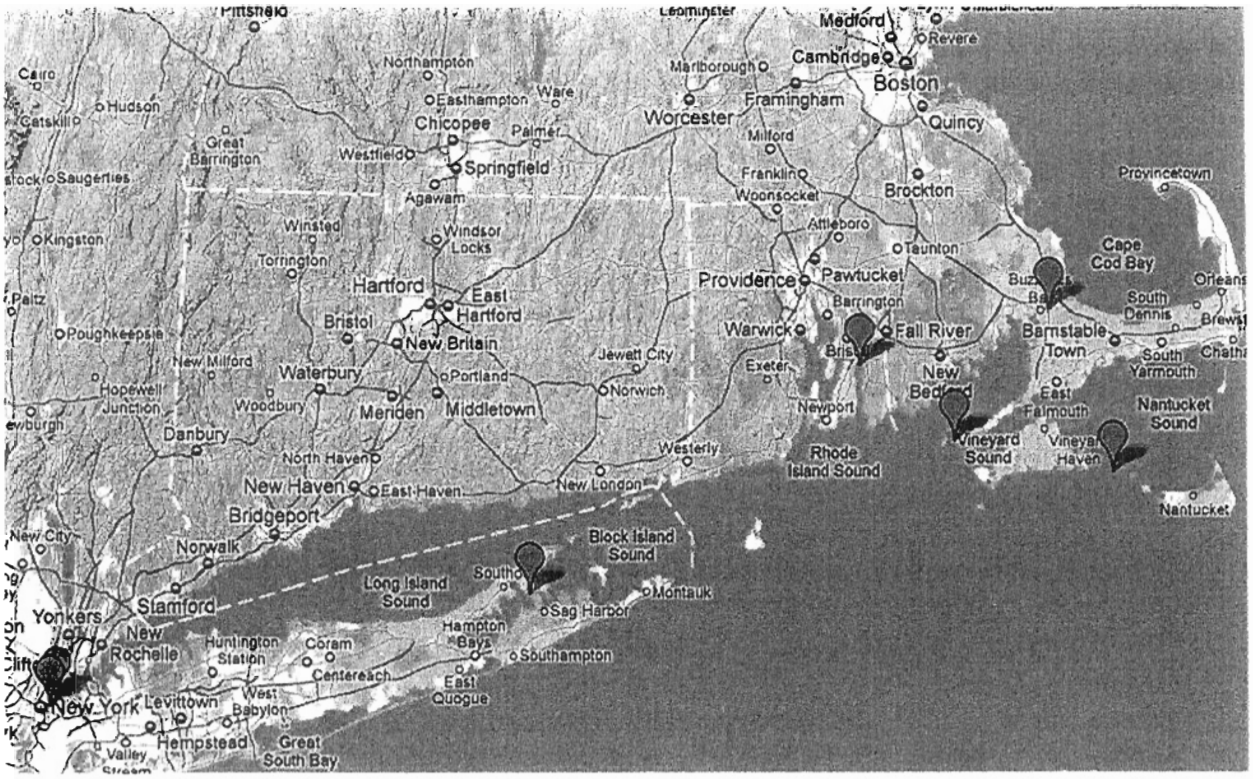
These recent advances have created a more streamlined and cohesive process by which the two agencies can license and regulate offshore hydrokinetic projects, thus accelerating the development of hydrokinetic projects in New England. In fact, there are currently 17 hydrokinetic projects pending in New England, New Jersey, and New York, which have all received preliminary permits from FERC and have the potential to produce approximately 763 MWs of electricity. These pending hydrokinetic projects in the region are rapidly moving forward and many have already submitted the required Notice of Intent to file an application and draft application with FERC, including the time frame for consulting with federal, state, and local agencies, tribes, non-governmental organizations, and any other interested entities. Holders of preliminary permits are required to file a Notice of Intent to file an application and draft application within one year of receiving a preliminary permit. Additionally, the licensees of these projects have submitted and continue to submit required periodic progress reports to FERC that document significant progress in the development of the projects.

There are currently 12 projects pending in New England alone that are capable of producing 175.8 MWs of electricity. Additionally, in states immediately adjacent to New England, there are six projects pending that have the potential to provide 587 MWs of electricity to the region.

The following maps illustrate these proposed hydrokinetic projects.


Brockville
Bobcaygeon
Marmora
Madoc
Tweed
Lindsay
Peterborough
Gananoque
Alexandria Bay
Gouverneur
Napanee
Kingston
Clayton
Frankford
Belleville
Deseronto
Cape Vincent
Philadelphia
Trenton
Fort Drum
Clarington
Brighton
Picton
Calcium
Carthage
Wellington
Sackets Harbor
Watertown
Oshawa
Cobourg
Whitby
Adams
Adams Center
Lowville
Lake Ontario
Pulaski
Oswego
Mexico
Fulton
Camden
Newfane
Hilton
Albion
Brockport
Sodus
Wolcott
Phoenix
Rome
Lockport
Medina
Rochester
Webster
Baldwinsville
Niagara Falls
Caughdenoy
Palmyra
Lyons
Clyde
Jordan
Liverpool
Oneida
Sherrill
Akron
Pittsford
Newark
Syracuse
Chittenango
Clinton


Milo
Dover-Foxcroft
St Stephens
Calais
Bingham
Dexter
Eastport
Old Town
Milford
Newport
Bangor
Orono
Madison
Skowhegan
Brewer
Pittsfield
Machias
Farmington
Hampden
Norridgewock
Grand Manan Channel
Wilton
Fairfield
Bucksport
Ellsworth
Oakland
Waterville
Jonesport
Goulsboro
Livermore Falls
Belfast
Penobscot Bay
Augusta
Bar Harbor
Winthrop
Hallowell
Camden
Southwest Harbor
Gardiner
Deer Isle
Rockland
Waldoboro
Auburn
Lewiston
Thomaston
Lisbon Falls
Bath
Freeport
Brunswick
Yarmouth
Casco Bay
Portland



The noted sites include:

- <u>Town of Wiscasset Tidal Resources Project</u>
  Wiscasset, ME
- <u>Shearwater Design Homeowner Tidal Power Project</u>
  Kennebec River, ME
- <u>AER NY-Kinetics Ogdensburg Kinetic Energy Project</u>
  New York
- <u>RI Energy Group Sakonnet River Project</u>
  Sakonnet River, RI
- <u>Hydro Green New York 1 Project</u>
  On the Niagara River in Niagara County, NY
- <u>Hydro Green New York 2 Project</u>
  Niagara County, NY

- Verdant Power RITE Project (New York, NY)
  East River (E shore of Roosevelt Island)
- Astoria Tidal Energy Project (New York, NY)
  East River (N of the tip of Roosevelt Island)
- ORPC Western Passage Tidal Project (Eastport, ME)
  Western Passage
- Half Moon Tidal Energy Project (Quoddy, ME)
  Quoddy Village
- Passamaquoddy Tribe Hydrokinetic Project
  Perry, ME
- ORPC Cobscook Bay Tidal Energy Project
  Eastport, ME
- Castine Harbor & Badaduce Narrows
  Maine Maritime Academy (Atlantic Ocean)
- Natural Currents Energy Ser, L.L.C.
  Cape Cod Tidal Energy, Cape Cod MA
- Natural Currents Cuttyhunk/Elizabeth Islands Tidal
  Cuttyhunk/Elizabeth Island, MA
- Natural Currents Shelter Island Tidal Project
  Shelter Island, NY
- Town of Edgartown Edgartown/Nantucket Tidal
  Edgartown, MA
- Mananook Associates Grand Manan Channel Project
  Grand Manan Channel (Lubec, ME)

The federal government also appropriated funds in the American Recovery and Reinvestment Act of 2009 to boost development of renewable technologies, including hydrokinetic power. The inclusion of these funds in the American Recovery Reinvestment Act of 2009 has helped to secure the necessary funding needed to jumpstart many of these hydrokinetic projects. It is evident by the many pending hydrokinetic projects in the region that, since the issuance of the Cape Wind FEIS, many advancements have occurred that have spurred the development of hydrokinetic projects in New England, thus providing alternatives to the Cape Wind Project. These projects and technologies are now viable, and MMS has no legal justification for limiting its purpose and need statement to only wind projects when the stated goal is to provide an "alternate energy facility."

Onshore Alternatives

Finally, reasonable onshore alternatives for the production of renewable energy in the geographic area must also be considered, including the proposed construction of a wind project on the Massachusetts Military Reservation.

On June 11, 2009, after the publication of the FEIS, the Massachusetts National Guard announced a proposal to build a utility-scale wind project on the Massachusetts Military Reservation that would include up to 17 turbines, each 400 feet high. (Exhibit 17). As the first of many steps toward building the project at the 22,000 acre facility on Cape Cod, the National Guard has filed a site plan for review with the Federal Aviation Administration (FAA) and the Air Force Space Command. As a legal matter, MMS cannot fail to consider "onshore" sites, especially these located in the immediate vicinity of the Cape Wind proposal.

The plans require review by the FAA and the Air Force Space Command, which operates the PAVE PAWS radar station on the base. Both the FAA and the Air Force have already approved a 1.5 MW turbine for the base cleanup program. The National Guard proposal comes after a study released in February concluding that the Upper Cape base is a prime location for land-based wind turbines. That report, released by the state Executive Office of Energy and Environmental Affairs, said the base has the potential to host up to 46.5 MWs of electricity. (Exhibit 17). The Massachusetts Military Reservation site was not considered in the FEIS because at the time it was not available. That rationale is no longer valid, as a result of the Commonwealth's plan to now develop the site.

Conclusion

The Cape Wind EIS was defective from the outset due to its improperly narrow, result-oriented purpose and need statement, which led to an illegal alternatives analysis. Recent developments have confirmed that the EIS incorrectly precluded reasonable alternatives. In addition to the flaws that existed at the time the EIS was released, subsequent developments have created the need for a supplemental EIS and additional public review.

These new alternatives, combined with President Obama's June 12, 2009, national ocean policy and marine spatial planning directives, provide the basis for a new approach to consensus-based decision making that both protects Nantucket Sound (making possible its long-overdue consideration for national marine sanctuary designation) and remove the controversy that stands in the way of the development of properly sited offshore wind energy projects in New England. Now is the time for MMS to show true leadership in Northeast ocean management planning and offshore energy development by redirecting the Cape Wind review so that a win-win outcome can be achieved.